

EPAUnited States Environmental Protection Agency
Washington, DC 20460**Work Assignment**

Work Assignment Number

01-01

☐ Other☐ Amendment Number:

Contract Number

EP-C-15-012

Contract Period 08/01/2015 To 07/31/2017

Base

Option Period Number 1

Title of Work Assignment/SF Site Name

Water Security Initiative

Contractor

CSC GOVERNMENT SOLUTIONS LLC

Specify Section and paragraph of Contract SOW

2.2, 2.6, 2.11, 2.15, 2.17

Purpose:



Work Assignment



Work Assignment Close-Out



Work Assignment Amendment



Incremental Funding



Work Plan Approval

Period of Performance

From 08/01/2016 To 07/31/2017

Comments:



Superfund

Accounting and Appropriations Data



Non-Superfund

SFO

(Max 2)



Note: To report additional accounting and appropriations data use EPA Form 1900-69A.

Line	DCN (Max 6)	Budget/FY (Max 4)	Appropriation Code (Max 6)	Budget Org/Code (Max 7)	Program Element (Max 9)	Object Class (Max 4)	Amount (Dollars)	(Cents)	Site/Project (Max 8)	Cost Org/Code
1										
2										
3										
4										
5										

Authorized Work Assignment Ceiling

Contract Period:

08/01/2015 To 07/31/2017

Cost/Fee:

LOE: 0

This Action:

14,579

Total:

14,579

Work Plan / Cost Estimate Approvals

Contractor WP Dated:

Cost/Fee

LOE:

Cumulative Approved:

Cost/Fee

LOE:

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Branch/Mail Code:

Phone Number: 513-569-7131

FAX Number:

(Signature)

(Date)

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(Date)

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(Date)

**WORK ASSIGNMENT
PERFORMANCE WORK STATEMENT (PWS)**

Contract No: EP-C-15-012

Work Assignment: WA-01-01

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LOE: 14,579 hours

Period of Performance: August 1, 2016 to July 31, 2017

Title: Surveillance and Response Systems

PWS Sections: 2.2, 2.6, 2.11, 2.15, 2.17

I. PURPOSE:

The purpose of this work assignment (WA) is to increase the knowledge base for Water Quality Surveillance and Response Systems (SRS) for drinking water utilities, and to use this knowledge to promote the voluntary adoption of practices relating to SRS deployment. This goal will be achieved through the development of guidance, tools, and other products that disseminate information to the Water Sector gained through the Water Security Initiative (WSI) pilots, research, and other sources.

To achieve this purpose the contractor shall support EPA in the development of products that enable the Water Sector to implement SRS. In general the work falls into two main areas: 1)

product development and 2) outreach and training. Under product development, the contractor shall support EPA in the development of guidance, tools, and other materials that can be used by the Water Sector to implement SRS. These products will be made available through the Water Quality Surveillance and Response (WQSR) Microsite. Under outreach and training, the contractor shall support EPA in the development of outreach materials such as factsheets, videos, informational materials, and other products that serve to increase awareness of SRS practices in the Water Sector. The contractor shall also develop high quality training materials including presentations and webinars, and shall facilitate in-person training events. The WQSR Microsite along with the outreach and training program will be EPA's primary vehicle for dissemination of SRS-related information to the Water Sector.

The intended audience for the products developed under this WA is the Water Sector, including: drinking water utilities, wastewater utilities, laboratories, response partners, and technical assistance providers.

This project supports programmatic needs related to our national all hazards and homeland security responsibilities by improving the ability of drinking water systems to detect and respond to unusual water quality conditions in source water and distribution systems.

Other partners and external offices or agencies which should be coordinated with include: Department of Homeland Security (DHS), Centers for Disease Control and Prevention (CDC), Office of Ground Water and Drinking Water, Standards and Risk Management Division (OGWDW-SRMD), Office of Ground Water and Drinking Water, Drinking Water Protection Division (OGWDW-DWPD), American Water Works Associations (AWWA), and Association of State Drinking Water Administrators (ASDWA).

This work assignment supports the mission of the Water Security Division (WSD) as described in the Water Security Strategy framework, which relates resources, activities, outputs, audience, short- and long- term outcomes to the WSD pillars of Prevention, Detection, Response, and Recovery. Additionally, this work assignment contributes to the commitments made in EPA's *Strategic Plan: 2011 to 2015* and EPA's *Homeland Security Strategy (2004)*. Under EPA's *Strategic Plan*, reference is made to Goal 2 (Clean and Safe Water), Objective 2.1 (Protecting Human Health), Sub-objective 2.1.1 (Water Safe to Drink), and to the Cross-Goal on homeland security. Under EPA's *Homeland Security Strategy*, reference is made to Objective 1 (Critical Infrastructure Protection).

In fulfillment of these requirements, this contract supports the nation's drinking and wastewater infrastructure, collectively known as the Water Sector, in being informed, coordinated, and prepared to prevent, detect, respond to, and recover from terrorist attack and other intentional acts, natural disasters, and other hazards (referred to as the "all hazards" approach), which may also occur, including the needs and challenges posed by natural disasters, catastrophic events, adaptation and impacts of climate change, floods, earthquakes,

pandemic illness, and any other events which impact the safety and availability of our water supply.

In pursuit of these efforts, the contractor may be tasked with preparing a correlation summary comparing the results under this work assignment to the components of the Water Security Strategy framework.

II. BACKGROUND:

Homeland Security Presidential Directive 9 (HSPD9) was signed on June 30, 2004. It established a national policy to defend the agriculture and food system against terrorist attacks, major disasters, and other emergencies. HSPD9 specifically required EPA to "develop robust, comprehensive, and fully coordinated surveillance and monitoring systems ... for ... water quality that provide early detection and awareness of disease, pest, or poisonous agents." EPA's response to HSPD9 was to establish WSI, a program to develop, evaluate, and promote SRS in the Water Sector.

An SRS involves the active deployment and use of monitoring and surveillance strategies to collect, integrate, analyze, and communicate information to provide a timely warning of potential water quality problems and to initiate a response to correct the identified problem. The four surveillance components of the SRS architecture include:

- Online Water Quality Monitoring for parameters in order to detect a change from an established baseline. This includes monitoring in the source water and distribution system.
- Enhanced Security Monitoring to detect physical intrusions into a drinking water facility that provides access to finished water. This includes Advanced Metering Infrastructure to detect tampering and backflow events at service connections.
- Customer Complaint Surveillance to detect changes in the aesthetic character of the water that might indicate a deterioration in water quality.
- Public Health Surveillance to detect unusual occurrence of disease or illness in the population and to determine if it's related to contaminated drinking water.

The SRS architecture also includes two response components: Consequence Management and Sampling and Analysis. If the investigation of an alert from a surveillance component cannot rule out contamination, Consequence Management is activated to guide the threat level determination process and response actions to minimize consequences. Sampling and Analysis is performed during the investigation of a possible contamination incident in an attempt to confirm contamination and identify the specific agent. Activities performed under sampling and analysis include field safety screening and rapid field testing that occur during site characterization as well as laboratory analysis of samples collected from the field. This component also includes routine monitoring to establish a baseline for key contaminants.

EPA is implementing the SRS program in three phases: 1) design an effective SRS architecture; 2) demonstrate and evaluate the SRS architecture through a pilot program; and 3) develop guidance and products to promote voluntary adoption of SRS practices within the Water Sector. EPA has completed the first two phases of WSI, and made substantial progress in the third phase during fiscal years (FY) 12, 13, 14, 15, and 16. EPA will continue this effort under the first option period for this contract and through the end of FY17. Specifically, EPA intends to complete development of all SRS guidance and tools and launch the SRS outreach and training program.

III. QA REQUIREMENTS:

Sub-tasks 1.1, 1.4, 1.5, 4.2, 4.3, 5.3, 5.4, 6.2, and 8.2 in this WA require quality assurance (QA). Consistent with the Agency's QA requirements, the contractor must prepare a complete Project Specific Quality Assurance Project Plan (PQAPP), to assure the quality of the data used under this WA. Work on these sub-tasks cannot proceed until the contractor receives notification of PQAPP approval from the Contract Level Contracting Officer Representative (CLCOR) via e-mail. The QA requirements must be addressed in the work plan and monthly progress reports as specified under Task 0, below.

IV. DETAILED TASK DESCRIPTION:

All direction under this WA will be provided as written technical direction from the WACOR, Alternate WACOR, or Task Manager (TM), as appropriate. If provided first as verbal technical direction to the contractor, it will be confirmed in writing within 5 calendar days, with a copy to the Contract Level Contracting Officer's Representative (CLCOR) and the Contracting Officer (CO), and is subject to the limitations of the technical direction contract clause. The WACOR or TM will provide LOE estimates with each tasking and the contractor shall not exceed the estimated LOE without justification and approval by the WACOR or TM.

Unless otherwise specified, the contractor should assume that all products listed in this WA will be developed in the following stages: outline, multiple internal drafts for EPA review, review draft for external peer review, and final draft for publication. Each initial deliverable shall be provided to the EPA WACOR or TM in draft form for review and comment. The contractor shall incorporate WACOR or TM review comments into subsequent revisions. The EPA WACOR or TM will coordinate peer review of the draft product. The contractor, in consultation with the EPA WACOR or TM, shall review all comments and the contractor shall prepare a disposition of comments using a format specified by the WACOR or TM. The contractor shall revise each product according to a revision plan approved by the EPA WACOR or TM, and prepare it for publication. All final products will also undergo a complete technical, editorial, and managerial

review. This review shall ensure that the document complies with standards in the *SRS Style Guide*, and the *EPA Style Guide*. Any products that will be published shall also be reviewed and revised for 508 compliance.

The contractor shall notify the WACOR or TM of all staff involved in the production of technical products and guidance, and these staff shall participate in all substantive discussions with the EPA WACOR or TM related to products on which they work.

In addition to Task 0, *Work Plan, Progress Evaluations, and Monthly Project Reports*, there are eight tasks described in this work assignment. Each of these tasks will be managed by the TM indicated in the following table, who is authorized to provide technical direction to the contractor for the designated task.

Task	Task Description	Task Manager
0	Work Plan, Progress Evaluations, and Monthly Project Reports	Steve Allgeier
1	Web-based Tools	Matt Umberg
2	Outreach and Training	Steve Allgeier
3	Online Water Quality Monitoring	Matt Umberg
4	Enhanced Security Monitoring	Nelson Mix
5	Customer Complaint Surveillance	Nelson Mix
6	Public Health Surveillance	Steve Allgeier
7	Sampling and Analysis	Elizabeth Hedrick
8	Consequence Management	Bill Platten

Task 0: Work Plan, Progress evaluations, and Monthly Progress Reports (LOE 1,650)

The contractor shall develop a WP that describes how each task will be carried out. The work plan shall include a schedule, staffing plan, level of effort (LOE), and cost estimate for each task, the contractor's key assumptions on which staffing plan and budget are based, and qualifications of proposed staff. In addition, the work plan shall include the requirement that all electronic and information technology (EIT) and all EIT deliverables be Section 508 compliant in accordance with the policies referenced at <http://www.epa.gov/accessibility/>. If a subcontractor(s) is proposed and subcontractors are outside the local metropolitan area, the contractor shall include information on plans to manage work and contract costs.

In addition, the contractor shall prepare a PQAPP, as noted above, and ensure the quality of secondary data and software used to complete these sub-tasks. The work plan shall explain when the PQAPP will be submitted based on the specific data requirements of the WA. This task also includes monthly progress and financial reports. The monthly progress report shall

indicate, in a separate QA section, whether significant QA issues have been identified and how they are being resolved. The work plan shall explain when the PQAPP will be submitted based on the specific data requirements of the WA. Work on these sub-tasks cannot proceed until the contractor receives notification of PQAPP approval from the CL COR via e-mail.

In each monthly progress report, the contractor shall, at the introduction to the discussion of this WA, discuss actual progress toward achieving the purpose of this work assignment, including problems encountered, issues that may need to be resolved, and anticipated timing for completing the goals of the WA. The contractor shall provide an overview of contract projects, striving to implement efficiencies in performance when complimentary requirements are issued. The contractor shall assure that duplication of effort relative to other ongoing WA under this contract is not occurring.

In addition, the contractor shall submit a financial tracking spreadsheet populated with incurred and lagging costs for the current billing cycle. The EPA WACOR will provide a template for the financial tracking spreadsheet. The financial tracking spreadsheet shall be updated and submitted monthly along with the monthly progress and financial report.

EPA does not anticipate the need for the contractor to travel in support of this task.

Task 0 Deliverables: Specific deliverables under this task are listed in the following table:

Sub-task	Deliverable	Due to EPA
0	WA-01-01 Work Plan including: schedule, staffing plan, LOE, cost estimates, key assumptions, and qualifications of proposed staff	20 days after receipt of WA
0	Monthly progress and financial reports, including updates to the financial tracking spreadsheet. Summary of Quality Assurance Activities and Issues by Work Assignment.	Monthly, as specified in the contract
0	PQAPP for sub-tasks 1.1, 1.4, 1.5.4.2, 4.3, 5.3, 5.4, 6.2, and 8.2 of this WA. Checklist for Quality Assurance Project Plans.	20 days after receipt of WA

Task 1: Web-based Tools (LOE 2,640)

Task 1 supports the development of web-based tools that guide the utilization of other SRS products posted on the WQSR Microsite. The primary objective of Task 1 is to develop tools that enhance the user experience with the WQSR Microsite and help users locate products in their areas of interest. The contractor shall support this task with staff having an in-depth understanding of effective website design and building HTML5 web-based tools with application interfaces. Task 1 is divided into five sub-tasks:

1. Build SRS Component Capabilities Assessment Tools
2. Develop Roadmap to SRS Products
3. Support Maintenance of the WQSR Microsite

4. Support the *Information Management Requirements Development Tool*
5. Support the *SRS Exercise Development Toolbox*

Each sub-task is described below, and additional details regarding each sub-task will be provided to the contractor through written technical direction. EPA does not anticipate the need for the contractor to travel in support of this task.

Sub-task 1.1: Build SRS Component Capabilities Assessment Tools

Under this sub-task, the contractor shall support EPA in building a Capabilities Assessment Tool (CAT), for each of the six SRS components. The CATs shall be developed as HTML5 web-based tools with application interfaces.

Each CAT will present a user with up to 24 questions to assess their utility's existing capabilities with respect to a given SRS component. Each question will be presented on a dedicated screen, and the exact sequence of questions a user encounters may depend on their responses to questions presented to them. After a user has completed an entire sequence of questions, they will then be presented with a series of screens that provides an evaluation of existing capabilities relative to target capabilities. Depending on how a user responds to questions, they will be presented with one of at least three static responses developed for a given capability: 1) the existing capability does not achieve the target capability, 2) the existing capability partially achieves the target capability (possibility of multiple responses for different partial capabilities), or 3) the existing capability fully achieves the target capability. For each of these possible outcomes, the CAT will list potential enhancements to improve existing capabilities and direct the user to resources that could help them implement such enhancements.

EPA has completed a design document which describes how the CATs will be built and should function. An architecture diagram from the document is presented in **Figure 1-1** (note that an Oracle database will be used instead of the SQL Server shown in the figure). EPA has also developed detailed mock-ups which depict the desired look and feel, text styles, and screen designs to be used for the CATs. Both the design and mock-up documents will be provided to the contractor. EPA will also provide the contractor with all of the SRS component-specific content required to build the CATs, which will be developed under Tasks 3 through 8.

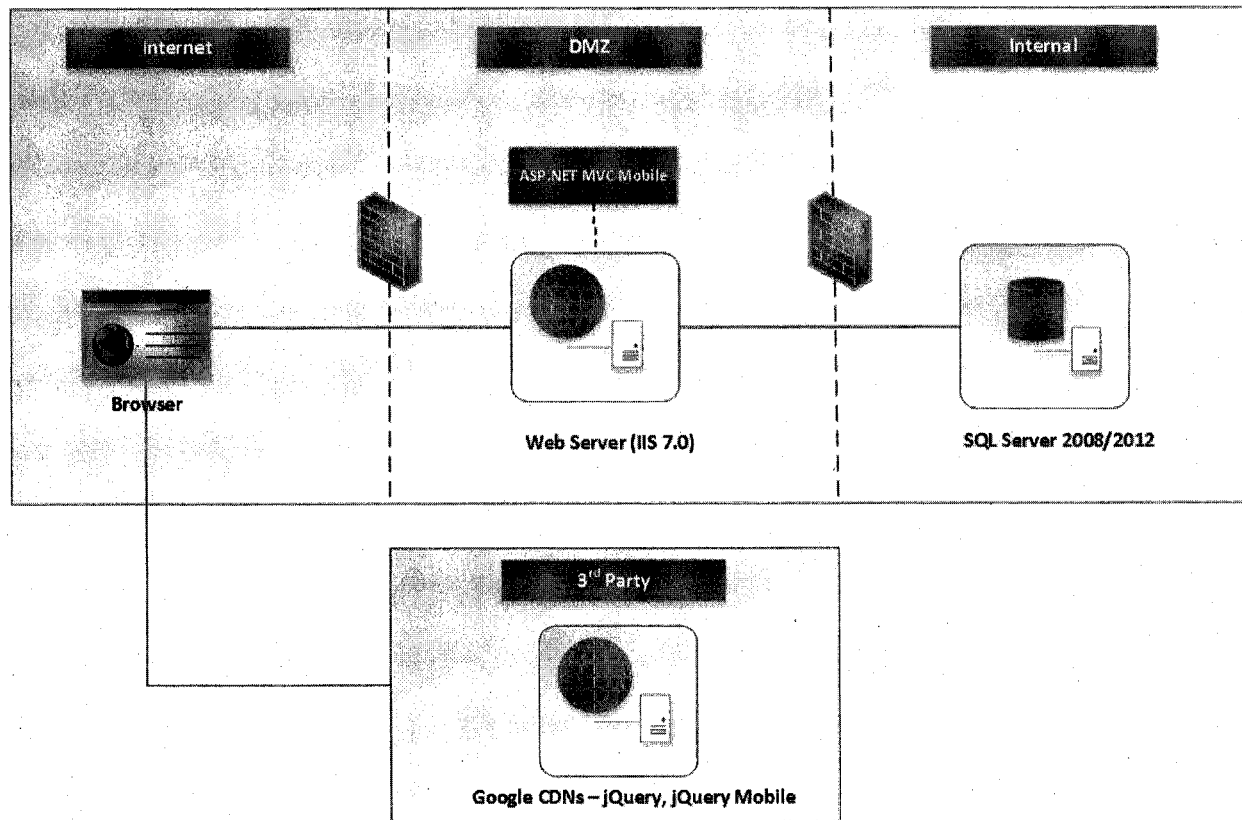


Figure 1-1. Capabilities Assessment Tool Architecture Diagram

To finalize the CATs and prepare them to be posted to the WQSR Microsite, the contractor shall:

- Develop initial versions of the CATs
- Revise the functionality of the CATs to address peer review comments (comments on component content will be addressed by Tasks 3 through 8)
- Modify the CATs to address functionality issues, including 508 compliance, identified during final product review
- Update the CATs to correct bugs identified by EPA personnel and other users. The contractor shall track known and reported issues.

It is anticipated that initial versions of the PHS CAT will be completed by July 31, 2016. Other CATs would follow the model established by the PHS CAT.

Sub-task 1.2: Develop Roadmap to SRS Products

Under this sub-task, the contractor shall support EPA in developing a *Roadmap to SRS Products*. The roadmap will inform users of relevant SRS products and provide a suggested progression through these products based on potential use cases. EPA has developed a PowerPoint document that identifies ten potential use cases with associated progressions. This document will be provided to the contractor. To finalize the "Roadmap" product and prepare it to be

posted to the WQSR Microsite, the contractor shall:

- Conduct a review of available platforms for the roadmap that meet EPA requirements
- Complete the roadmap design
- Update the roadmap design to address peer review comments
- Prepare a 508 compliant version of the final product for publication and posting to the WQSR Microsite

Sub-task 1.3: Support Maintenance of the WQSR Microsite

Under this sub-task, the contractor shall support EPA in maintaining the WQSR Microsite.

Maintenance activities that may be included under this effort include:

- Developing mock-ups of up to ten new WQSR Microsite pages
- Facilitating the transfer of tools or products across servers (potentially requiring the development of link pages)
- Updating documents posted to the Microsite, which may involve: updating links in documents published prior to the Drupal platform conversion; updating terminology for consistency with the SRS paradigm, updating cover pages, and other minor edits as specified by the EPA TM.

Sub-task 1.4: Support the *Information Management Requirements Development Tool*

Under this subtask, the contractor shall support EPA in maintaining the *SRS Information Management Requirements Development Tool* (IMRT), an interactive, computer-based program that helps users define, consolidate, and prioritize requirements for an information management system that supports real-time distribution system monitoring through components of an SRS. The IMRT is available for download on the WQSR Microsite. To maintain the IMRT, the contractor shall:

- Provide limited technical support to users of the IMRT
- Update the IMRT to correct bugs identified by EPA personnel and other users
 - The contractor shall track known and reported issues.
 - Bug fixes shall be addressed through release of new versions of the IMRT.

Sub-task 1.5: Support the *SRS Exercise Development Toolbox*

Under this subtask, the contractor shall support EPA in maintaining the *Water Quality Surveillance and Response System Exercise Development Toolbox* (SRS-EDT), an interactive, computer-based program to assist drinking water utilities in designing, developing, conducting, and evaluating discussion-based and operations-based exercises for an SRS. The SRS-EDT is available for download on the WQSR Microsite. To maintain the SRS-EDT, the contractor shall:

- Provide limited technical support to users of the SRS-EDT
- Update the SRS-EDT to correct bugs identified by EPA personnel and other users
 - The contractor shall track known and reported issues
 - Bug fixes shall be addressed through release of new versions of the SRS-EDT

Task 1 Deliverables: Final deliverables under this task are listed in the following table:

Sub-task	Deliverable	Due to EPA
1.1	Final versions of SRS component CATs	As specified in written technical direction
1.2	Final version of <i>Roadmap to SRS Products</i>	As specified in written technical direction

Task 2: Outreach and Training (LOE 1,600)

Task 2 supports outreach and training activities under the SRS Program. Under Task 2, the contractor shall develop high quality, finished products in a variety of media from simple factsheets and flyers to training modules and videos. Content that the contractor shall convert to outreach and training materials may be developed under this task, or under Tasks 3 through 8 of this WA. In general, this content will be derived from existing materials (e.g., guidance documents, tools, presentations, etc.). The contractor shall also provide logistical support and facilitation of live webinars and in-person training events.

This task requires staff with previous experience in developing training modules and videos using professional-grade, multi-media production software. The contractor shall have experience or training in communication and marketing to a variety of technical and non-technical audiences. The contractor shall arrange for professional narrators to record scripts for videos and training modules. The contractor shall have access to free stock images or fee-based images, if required. The contractor shall be able to print color posters up to 36 inches wide. The contractor shall ensure that all products developed under this task are consistent with standards in the *SRS Product Style Guide*, compliant with applicable EPA multi-media standards, and compliant with 508 standards. The contractor shall stay apprised of the Water Security Division's (WSD's) comprehensive communication and outreach efforts to ensure that products developed under this task maintain the look and feel of other WSD products.

This task is divided into four sub-tasks:

1. Produce Factsheets, Flyers, and Posters
2. Produce Training Modules and Videos
3. Provide Logistical and Facilitation Support for In-person Training
4. Provide Logistical and Facilitation Support for Webinars

Each sub-task is described below, and additional details regarding each sub-task will be provided to the contractor through written technical direction. Contractor travel may be required to support this task. For estimating purposes, assume two trips, each requiring a two night stay and participation from two contractors.

Sub-task 2.1: Produce Factsheets, Flyers, and Posters

Under this sub-task, the contractor shall develop high-quality outreach materials, such as factsheets, flyers, and posters. Content for outreach materials shall be prepared by contractor personnel with appropriate subject matter expertise. This content will be reviewed and edited by the EPA WACOR. Once the content has been finalized and approved by the EPA WACOR or TM, the contractor shall develop the finished product for final review and approval. The format of each product will be specified, but for estimating purposes, assume that up to six flyers or factsheets and two 36 inch posters will be developed.

Sub-task 2.2: Produce Training Modules and Videos

Under this sub-task, the contractor shall develop high-quality training modules and videos. Training modules will be based on PowerPoint slides, or "screen-capture" video from applications or websites, and developed by contractor personnel with the appropriate subject matter expertise. Once the content has been finalized and approved by the EPA WACOR or TM, the contractor shall develop a script and animation instructions for each slide or scene. The script shall be recorded by a professional narrator, and matched with the slide animation or screen capture video. The final product must be converted to "mp4" format to allow the final video to be posted to the EPA YouTube Channel. Topics for pre-recorded webinars will be specified in technical direction and may include tutorials for using SRS tools and self-guided learning on the principles of SRS design. For estimating purposes, assume up to 8 training modules (i.e., using either PowerPoint slides or "screen-capture" video) will be developed.

Videos may require the contractor to shoot live footage, purchase stock footage, or build computer generated imagery (CGI) sequences. The EPA WACOR will specify parameters for any video project, including the topic, key sequencing, format, style, and duration. The contractor shall use these parameters to develop a script and a storyboard for the video, which will be reviewed by the EPA WACOR. The final script shall be recorded by a professional narrator, and matched with the video elements. The final product must be converted to "mp4" format to allow the final video to be posted to the EPA YouTube Channel. Topics for videos will be specified in technical direction and may include revisions to the SRS Introduction Video, video testimonials from SRS implementers, and documentation of mini-pilots (as described in Tasks 4, 5, and 6). For estimating purposes, assume up to 2 videos will be developed, collectively requiring no more than three days of shooting, 2 hours of stock footage, and 1 hour or CGI.

Sub-task 2.3: Provide Logistical and Facilitation Support for In-Person Training

Under this sub-task, the contractor shall provide logistical and facilitation support for in-person training events. The contractor shall compile printed participant manuals, pre-loaded thumb-drives, hand-outs, name tags, sign-in sheets, and course evaluation forms. The contractor shall facilitate training events by introducing speakers, alerting speakers to questions from the audience, and managing time. The contractor shall participate in planning meetings prior to the training event, compile course evaluations, and capture lessons-learned to improve future training. The contractor may be required to coordinate registration for training events using

EventBrite or other types of registration software. The contractor may be required to help arrange for participants to receive contact hour credits for attending the course. The contractor may also be required to support development PowerPoint presentations, in close collaboration with EPA personnel. For estimating purposes, assume up to two in-person training events requiring two contractors to travel to the training venue for two nights per event.

Sub-task 2.4: Provide Logistical and Facilitation Support for Live Webinars

Under this sub-task, the contractor shall provide logistical and facilitation support for delivery of on-line webinars. PowerPoint presentations shall be prepared by contractor personnel with appropriate subject matter expertise. The contractor may be required to use Adobe Connect or other webinar software. The contractor shall participate in planning meetings, coordinate webinar registration, introduce speakers, facilitate Q&A time, and help arrange for contact hour credit (if requested). The contractor may also be required to support development PowerPoint presentations, in close collaboration with EPA personnel. The contractor shall also compile summary information from the webinar, such as attendee lists, answers to polling questions, and Q&A. For estimating purposes, assume up to 12 live webinar events.

Task 2 Deliverables: Final deliverables under this task are listed in the following table:

Sub-task	Deliverable	Due to EPA
2.1	Final version of factsheet, flyer, or poster	As specified in written technical direction
2.2	Final version of training module	As specified in written technical direction
2.2	Final version of video	As specified in written technical direction
2.3	Final set of materials for in-person training event	As specified in written technical direction
2.3	Final course evaluation and lessons learned report from each in-person training event	As specified in written technical direction
2.4	Final version of webinar presentation materials	As specified in written technical direction
2.4	Final version of brief summary report from each webinar event	As specified in written technical direction

Task 3: Online Water Quality Monitoring (LOE 1,630)

Task 3 supports the Online Water Quality Monitoring (OWQM) component of the SRS Program. The OWQM component consists of two primary applications: source water monitoring (SWM) and distribution system monitoring (DSM). The primary objective of Task 3 is to develop guidance and training materials to support voluntary implementation of OWQM by drinking water utilities. The contractor shall support this task using personnel with excellent technical writing and product development capabilities as well as experience with OWQM design and operation, particularly with respect to water quality parameters, sensor technologies, sensor

placement, information management and analysis, and alert investigations. Task 3 is divided into seven sub-tasks:

1. Develop *Selecting OWQM Parameters and Evaluating Sensor Technologies* Document
2. Develop *Operational Benefits and Detection Capabilities Provided by OWQM* Document
3. Develop *Identifying OWQM Locations and Evaluating Potential Monitoring Sites* Document
4. Develop *OWQM Design Guidance* Documents
5. Develop Content for *OWQM Capabilities Assessment Tool*
6. Develop *Introduction to Water Quality Data Analysis* Training Module
7. Develop OWQM Outreach and Training Products

Each sub-task is described below, and additional details regarding each sub-task will be provided to the contractor through written technical direction. EPA does not anticipate the need for the contractor to travel in support of this task.

Sub-task 3.1: Develop *Selecting OWQM Parameters and Evaluating Sensor Technologies* Document

Under this sub-task, the contractor shall support EPA in finalizing the guidance document: *Selecting OWQM Parameters and Evaluating Sensor Technologies*. This document will provide descriptions of SWM and DSM parameters, describe available technologies that can be used to monitor each parameter, list benefits that can be realized as a result of monitoring each parameter, and discuss factors that should be considered when evaluating sensor technologies. It is expected that the document will be approximately 80% complete by July 31, 2016. An updated version of the document will be provided to the contractor as needed.

To finalize the document and prepare it for publication, the contractor shall:

- Provide support for focused content and figure development
- Prepare a 508 compliant, PDF version of the final document for publication and posting to the WQSR Microsite

Sub-task 3.2: Develop *Operational Benefits and Detection Capabilities Provided by OWQM* Document

Under this sub-task, the contractor shall support EPA in finalizing the guidance document: *Operational Benefits and Detection Capabilities Provided by OWQM*. This document will provide in-depth descriptions of operational benefits and detection capabilities that can be realized as a result of DSM implementation (and potentially SWM too). Each description will include discussions of all OWQM parameters that can be used to achieve a particular benefit. It is expected that the document will be approximately 40% complete by July 31, 2016. An updated version of the document will be provided to the contractor as needed.

To finalize the document and prepare it for publication, the contractor shall:

- Provide support for focused content and figure development

- Prepare a 508 compliant, PDF version of the final document for publication and posting to the WQSR Microsite

Sub-task 3.3: Develop *Identifying OWQM Locations and Evaluating Potential Monitoring Sites* Document

Under this sub-task, the contractor shall support EPA in finalizing the guidance document: *Selecting OWQM Monitoring Locations and Evaluating Potential Monitoring Sites*. This document will first describe approaches that utilities can use to determine optimal DSM locations (e.g., a city block), based on a limited number of use cases. The document will then discuss OWQM station requirements (e.g., water supply, power supply, available drain, etc.) that should be considered when evaluating potential DSM sites (e.g., a basement in a fire house). It is expected that the document will be approximately 30% complete by July 31, 2016. An updated version of the document will be provided to the contractor as needed.

To finalize the document and prepare it for publication, the contractor shall:

- Provide support for focused content and figure development
- Prepare a 508 compliant, PDF version of the final document for publication and posting to the WQSR Microsite

Sub-task 3.4: Develop OWQM Design Guidance Documents

Under this sub-task, the contractor shall support EPA in developing the guidance document: *Designing Online Water Quality Monitoring for Water Quality Surveillance and Response Systems*. It is expected that the document will be approximately 40% complete by July 31, 2016. An updated version of the document will be provided to the contractor as needed.

To finalize this document and prepare it for publication, the contractor shall:

- Complete a draft of the OWQM design guidance document and prepare for peer review
- Consolidate peer review comments, develop a revision plan for the document, and implement the revision plan
- Prepare a 508 compliant, PDF version of the final document for publication and posting to the WQSR Microsite

The contractor shall also support EPA in finalizing the guidance document: *Source Water Monitoring for Water Quality Surveillance and Response Systems*. It is expected that a peer reviewed version of this document will be complete by July 31, 2016. An updated version of the document will be provided to the contractor as needed.

To finalize this document and prepare it for publication, the contractor shall:

- Complete revisions to the document based on peer review comments
- Prepare a 508 compliant, PDF version of the final document for publication and posting to the WQSR Microsite

Sub-task 3.5: Develop Content for OWQM Capabilities Assessment Tool

Under this sub-task, the contractor shall support EPA in developing content for the OWQM Capabilities Assessment Tool (OWQM-CAT). The OWQM-CAT is an interactive, web-based tool that presents a user with a series of questions to assess a utility's existing OWQM capabilities. The tool then compares these existing capabilities with target capabilities, recommends potential enhancements, and directs users to resources that could help them implement those enhancements. The contractor shall support EPA by developing the following content that is necessary to build the OWQM-CAT:

- Questions designed to determine existing OWQM capabilities
- Response choices for each question
- Statements of target capability for each OWQM design element
- Statements of existing capability for each OWQM design element for all possible permutations of responses to the OWQM-CAT questions related to that design element
- Descriptions of potential enhancements
- Descriptions of the specific resources available to implement each enhancement

To finalize the content and prepare it for coding, the contractor shall:

- Assist EPA with development of draft versions of content for the OWQM-CAT
- Revise the content based on peer review comments
- Revise the content to address comments generated during final product review
- Prepare the final content for coding (note that the actual coding will be performed under Task 1)

Sub-task 3.6: Develop Introduction to Water Quality Data Analysis Training Module

Under this sub-task, the contractor shall support EPA in developing an *Introduction to Water Quality Data Analysis* training module. This module will serve as a resource for drinking water personnel who are beginning to review water quality data, providing an overview of typical data characteristics for OWQM parameters and identifying potential causes of common water quality anomalies. The contractor shall develop this training module as a series of slides with simple animation and professional narration. Content for the training module will be developed under this sub-task. Production of the final training module will be coordinated under Task 2.

To develop content for this training module, the contractor shall:

- Develop an outline and concept for the training module
- Develop the visuals for the training module (e.g., PowerPoint slides or screen capture)
- Develop a script for the training module

Sub-task 3.7: Develop OWQM Outreach and Training Products

Under this sub-task, the contractor shall support EPA in developing up to four training and outreach products. EPA plans to task the contractor with developing up to two outreach products related to OWQM. These products should be concise and visually appealing, and may take the form of factsheets, articles, informatics, or other formats to be specified by the EPA

TM. Final production of finished products will be coordinated with Task 2. The specific topics and scope of the outreach products will be specified by the EPA TM through technical direction.

EPA plans to task the contractor with developing up to two training products related to OWQM. Training products will be developed in the form of PowerPoint presentations that can be delivered live, delivered as a webinar, or recorded as a multimedia training module. Final production, including professional narration and graphics development as needed, will be completed under Task 2. The topics and scope of the training products will be specified by the EPA TM through technical direction; however, potential topics include locating monitoring stations in a distribution system, information analysis methods, and case studies that demonstrate the value of monitoring OWQM parameters.

Task 3 Deliverables: Final deliverables under this task are listed in the following table:

Sub-task	Deliverable	Due to EPA
3.1	Final version of <i>Selecting OWQM Parameters and Evaluating Sensor Technologies</i> document in both PDF and Word formats (only the PDF needs to be 508 compliant)	As specified in written technical direction
3.2	Final version of <i>Operational Benefits and Detection Capabilities Provided by OWQM</i> document in both PDF and Word formats (only the PDF needs to be 508 compliant)	As specified in written technical direction
3.3	Final version of <i>Identifying OWQM Locations and Evaluating Potential Monitoring Sites</i> document in both PDF and Word formats (only the PDF needs to be 508 compliant)	As specified in written technical direction
3.4	Final version of OWQM Design Guidance Document in both PDF and Word formats (only the PDF needs to be 508 compliant)	As specified in written technical direction
3.4	Final version of SWM Design Guidance Document in both PDF and Word formats (only the PDF needs to be 508 compliant)	As specified in written technical direction
3.5	Final version of OWQM Capabilities Assessment Tool content	As specified in written technical direction
3.6	Final version of <i>Introduction to Water Quality Data Analysis</i> training module	As specified in written technical direction
3.7	Final versions of OWQM outreach products	As specified in written technical direction
3.7	Final versions of OWQM training products	As specified in written technical direction

Task 4: Enhanced Security Monitoring (LOE 1,140)

Task 4 supports the Enhanced Security Monitoring (ESM) component of the SRS Program. The primary objective of Task 4 is to develop ESM guidance and training materials to support voluntary implementation of ESM by drinking water utilities. The contractor shall support this task using personnel with excellent technical writing and product development capabilities as well as experience with security, risk assessment, coordinating with law enforcement, video and intrusion detection equipment datastreams, and data analysis methods. Task 4 is divided into four sub-tasks:

1. Develop Content for *ESM Capabilities Assessment Tool*
2. Demonstrate AMI as a Component of an SRS
3. Implement an ESM Mini-pilot
4. Develop ESM Outreach and Training Products.

Each sub-task is described below, and additional details regarding each sub-task will be provided to the contractor through written technical direction. Contractor travel may be required to support this task. For estimating purposes, assume three trips for two contractors, for two nights each trip.

Sub-task 4.1: Develop Content for the *ESM Capabilities Assessment Tool*

Under this sub-task, the contractor shall support EPA in developing content for the ESM Capabilities Assessment Tool (ESM-CAT). The ESM-CAT is an interactive web-based tool that presents a user with a series of questions in order to assess existing ESM capabilities. The tool then compares these existing capabilities with target capabilities, recommends potential enhancements, and directs the user to resources that could help them to implement those enhancements. The contractor shall support EPA by developing the following content that is necessary to build the ESM-CAT:

- Questions designed to determine existing ESM capabilities
- Response choices for each question
- Statements of target capability for each ESM (sub) design element
- Statements of existing capability for each ESM (sub) design element for all possible permutations of responses to the ESM-CAT questions related to that (sub) design element
- Descriptions of potential enhancements
- Descriptions of the specific resources available to implement each enhancement

Note that a substantial portion of this content was completed during the base period of this contract, and will be provided to the contractor in an editable format. To finalize the content and prepare it for coding, the contractor shall:

- Revise the content based on review and comments provided by the EPA TM
- Revise the content based on peer review comments
- Revise the content to address comments generated during final product review
- Prepare the final content for coding (note that the actual coding will be performed under Task 1)

Sub-task 4.2: Demonstrate AMI as a component of an SRS

Under this sub-task, the contractor shall support EPA in developing a one to two day workshop to discuss Advanced Metering Infrastructure (AMI) as a potential component of an SRS. Applications and challenges related to AMI may be discussed. EPA has drafted documents about AMI, which will be provided to the contractor as editable Word documents (along with source files for graphics contained in the documents). To plan, coordinate, deliver and

document the findings of the workshop the contractor shall:

- Prepare an agenda, registration and materials for utility and other participants
- Facilitate and participate in the workshop
- Take notes and summarize key findings and next steps from the meeting in the form of a final report

Additionally, the contractor shall complete the AMI mini-pilot that was initiated during the base period of this contract. The contractor will also be tasked to conduct one additional AMI mini-pilot. The purpose of the mini-pilot is to provide an opportunity for EPA to leverage available information from AMI projects in order to evaluate AMI applications in the context of an SRS. Potential focus areas for an AMI mini-pilot include: (1) identifying the feasibility of AMI as an SRS component; (2) evaluating application of AMI data for an SRS; and (3) developing and testing AMI alert investigation procedures. This sub-task will require two contractors to travel to the location of the workshop and mini-pilot. To support the AMI mini-pilot, the contractor shall:

- Assist EPA in identifying candidate utilities for one AMI mini-pilot
- Develop a project plan for the mini-pilot
- Provide technical and logistical support during implementation of the mini-pilot
- Collect data and information during the mini-pilot
- Draft a report summarizing the implementation, results, and findings from the mini-pilot

Sub-task 4.3: Implement an ESM Mini-pilot

Under this sub-task, the contractor shall support EPA in the implementation of one ESM mini-pilot. The purpose of the mini-pilot is to provide an opportunity for EPA to use some of the available ESM resources to help a utility implement elements of ESM, and evaluate the ESM resources used in this implementation. Possible focus areas for an ESM mini-pilot include: (1) identifying new and existing sites for selection and recommending security enhancements; (2) analyzing ESM alert data and invalid alert rates; (3) providing technical support for evaluation of communications systems; and (4) developing and testing ESM alert investigation procedures. This mini-pilot will include a data evaluation period and workshop involving key personnel from the pilot utility, and representatives from their law enforcement partner agencies. The workshop will not exceed two days. To support implementation of an ESM mini-pilot, the contractor shall:

- Assist EPA in identifying potential utilities for the mini-pilot
- Once the utility is selected, help to identify their law enforcement partners
- Develop a project plan for the mini-pilot
- Provide technical and logistical support during implementation of the mini-pilot
- Collect data and information during the mini-pilot
- Draft a report summarizing the implementation, results, and findings from the mini-pilot
- Collect video footage during the mini-pilot (coordinated under Task 2)

Sub-task 4.4: Develop ESM Outreach and Training Products

Under this sub-task, the contractor shall support EPA in developing up to three training and outreach products. EPA plans to task the contractor with developing up to two outreach products related to ESM. These products should be concise and visually appealing and may take the form of factsheets, articles, informatics, or other formats to be specified by the EPA TM. Production of the finished product will be completed under Task 2. The specific topics and scope of the outreach products will be specified by the EPA TM through technical direction.

EPA plans to task the contractor with developing up to two training products related to ESM. Training products will be developed in the form of PowerPoint presentations that can be delivered live, delivered as a webinar, or recorded as a multi-media training module. Final production, including professional narration and graphics development as needed, will be completed under Task 2. The topics and scope of each training products will be specified by the EPA TM through technical direction; however, potential topics include training for utilities on the role of enhanced security monitoring in an SRS, and a case study that will illustrate the importance of security monitoring in assuring the safety of the drinking water supply.

Task 4 Deliverables: Final deliverables under this task are listed in the following table:

Sub-task	Deliverable	Due to EPA
4.1	Final version of the content for the ESM-CAT	As specified in written technical direction
4.2	Final version of the report documenting findings and outcomes from the Advanced Metering Infrastructure workshop	As specified in written technical direction
4.2	AMI mini-pilot project plan	As specified in written technical direction
4.2	Final version of the AMI mini-pilot report	As specified in written technical direction
4.3	ESM mini-pilot project plan	As specified in written technical direction
4.3	Final version of the ESM mini-pilot report	As specified in written technical direction
4.4	Final version of ESM outreach products	As specified in written technical direction
4.4	Final version of ESM training products	As specified in written technical direction

Task 5: Customer Complaint Surveillance (LOE 1,100)

Task 5 supports the Customer Compliant Surveillance (CCS) component of the SRS Program. The primary objective of Task 5 is to develop CCS guidance and training materials to support voluntary implementation of CCS by drinking water utilities. The contractor shall support this task using personnel with excellent technical writing and product development capabilities as well as experience with contact centers, call and work management systems, customer service, and data analysis methods. Task 5 is divided into five sub-tasks:

1. Develop Content for *CCS Capabilities Assessment Tool*
2. Develop *CCS Complaint Handling Standards and Categorization Document*
3. Investigate Social Media as a CCS Datastream
4. Implement a CCS Mini-pilot
5. Develop CCS Outreach and Training Products

Each sub-task is described below, and additional details regarding each sub-task will be provided to the contractor through written technical direction. Contractor travel may be required to support this task. For estimating purposes, assume two trips for one contractor, for two nights each trip.

Sub-task 5.1: Develop Content for the CCS Capabilities Assessment Tool

Under this sub-task, the contractor shall support EPA in completing content for the CCS Capabilities Assessment Tool (CCS-CAT). The CCS-CAT is an interactive web-based tool that presents a user with a series of questions in order to assess existing CCS capabilities. The tool then compares these existing capabilities with target capabilities, recommends potential enhancements, and directs the user to resources that could help them to implement those enhancements. The contractor shall support EPA by developing the following content that is necessary to build the CCS-CAT:

- Questions designed to determine existing CCS capabilities
- Response choices for each question
- Statements of target capability for each CCS (sub) design element
- Statements of existing capability for each CCS (sub) design element for all possible permutations of responses to the CCS-CAT questions related to that (sub) design element
- Descriptions of potential enhancements
- Descriptions of the specific resources available to implement each enhancement

Note that a substantial portion of this content was completed during the base period of this contract, and will be provided to the contractor in an editable format. To finalize the content and prepare it for coding, the contractor shall:

- Revise the content based on review and comments provided by the EPA TM
- Revise the content based on peer review comments
- Revise the content to address comments generated during final product review
- Prepare the final content for coding (note that the actual coding will be performed under Task 1)

Sub-task 5.2: Develop a CCS Complaint Handling Standards and Categorization Document

Under this sub-task, the contractor shall support EPA in developing content for a *CCS Complaint Handling Standards and Categorization Document*. This document will summarize existing resources and standards related to water quality complaints, and how to incorporate these complaints into CCS. The document will define a process for developing complaint categories

that can be used to configure CCS datastreams. The document will include a decision tree template and a set of CCS data fields that can be used to document customer water quality complaints. The contractor shall support EPA in the development of this document as follows:

- Assist EPA in identifying literature and resources for the document
- List all relevant resources, standards, and customer complaint categories used by drinking water utilities
- Map the complaints categories to the decision tree template
- Develop the draft document and template
- Address all comments from EPA and prepare the document for peer review
- Consolidate peer review comments, develop a revision plan for the document, and implement the revision plan
- Prepare a 508 compliant, PDF version of the final document for publication and posting to the WQSR Microsite

Sub-task 5.3: Investigate Social Media Monitoring as CCS Datastream

Under this sub-task, the contractor shall support EPA in investigating Social Media Monitoring as a CCS datastream. Specifically the contractor shall evaluate the ability of free internet analytical products to support social media monitoring, refine open source code to perform social media monitoring, and use a water contamination case study to demonstrate social media monitoring as a CCS datastream (potentially using retrospective and/or prospective data analysis). The contractor may also interview up to nine drinking water utilities currently using social media to inform the investigation. The contractor shall support EPA by developing the following content that is necessary to demonstrate Social Media Monitoring as CCS datastream:

- Modifications to open source code
- A water contamination case study
- Finalize a report summarizing the Social Media Monitoring investigative findings

Sub-task 5.4: Implement a CCS Mini-pilot

Under this sub-task, the contractor shall support EPA in the implementation of one CCS mini-pilot. The purpose of the mini-pilot is to provide an opportunity for EPA to use some of the available CCS resources to help a utility implement elements of CCS, and evaluate the CCS resources used in this implementation. Possible focus areas for a CCS mini-pilot include: (1) using call and work management systems for CCS; (2) identifying and assessing opportunities for vendor integration; (3) establishing CCS complaint categories and thresholds; and (4) developing and testing CCS alert investigation procedures. This mini-pilot will include a workshop involving key personnel from the pilot utility and a data evaluation period. The workshop will not exceed two days. To support implementation of a CCS mini-pilot, the contractor shall:

- Assist EPA in identifying potential utilities for the mini-pilot
- Once the utility is selected, help identify partners
- Develop a project plan for the mini-pilot
- Provide technical and logistical support during implementation of the mini-pilot

- Collect data and information during the mini-pilot
- Finalize a report summarizing the implementation, results, and findings from the mini-pilot
- Collect video footage during the mini-pilot (coordinated under Task 2)

Sub-task 5.5: Develop CCS Outreach and Training Products

Under this sub-task, the contractor shall support EPA in developing up to three training and outreach products. EPA plans to task the contractor with developing up to two outreach products related to CCS. These products should be concise and visually appealing and may take the form of factsheets, articles, informatics, or other formats to be specified by the EPA TM. Final production of the finished product will be completed under Task 2. The specific topics and scope of the outreach products will be specified by the EPA WACOR through technical direction.

EPA plans to task the contractor with developing up to four training products related to CCS. Training products will be developed in the form of PowerPoint presentations that can be delivered live, delivered as a webinar, or recorded as a multi-media training module. Final production, including professional narration and graphics development as needed, will be completed under Task 2. The topics and scope of each training products will be specified by the EPA TM through technical direction; however, potential topics include a video tutorial that guides a utility through the process of designing a CCS component using available EPA resources, such as the *CCS Design Guidance*.

Task 5 Deliverables: Final deliverables under this task are listed in the following table:

Sub-task	Deliverable	Due to EPA
5.1	Final version of the content for the CCS-CAT	As specified in written technical direction
5.2	Final version of the <i>CCS Complaint Handling Standards and Categorization</i> Document in both PDF and Word formats (only the PDF needs to be 508 compliant)	As specified in written technical direction
5.3	Final Report for Social Media Monitoring	As specified in written technical direction
5.4	CCS mini-pilot project plan	As specified in written technical direction
5.4	Final version of the CCS mini-pilot report	As specified in written technical direction
5.5	Final version of CCS outreach products	As specified in written technical direction
5.5	Final version of CCS training products	As specified in written technical direction

Task 6: Public Health Surveillance (LOE 842)

Task 6 supports the Public Health Surveillance (PHS) component of the SRS Program. The primary objective of Task 6 is to develop PHS guidance and training materials to support voluntary implementation of PHS by drinking water utilities and their public health partners. The contractor shall support this task using personnel with excellent technical writing and product development capabilities as well as experience with public health partners, public health surveillance datastreams, and data analysis methods. Task 6 is divided into three sub-tasks:

1. Develop Content for *PHS Capabilities Assessment Tool*
2. Implement a PHS Mini-pilot
3. Develop PHS Outreach and Training Products

Each sub-task is described below, and additional details regarding each sub-task will be provided to the contractor through written technical direction. Contractor travel may be required to support this task. For estimating purposes, assume one trip lasting three days (two nights), and requiring participation from two contractor personnel.

Sub-task 6.1: Develop Content for *PHS Capabilities Assessment Tool*

Under this sub-task, the contractor shall support EPA in developing content for the PHS Capabilities Assessment Tool (PHS-CAT). The PHS-CAT is an interactive web-based tool that presents a user with a series of questions in order to assess existing PHS capabilities. The tool then compares these existing capabilities with target capabilities, recommends potential enhancements, and directs the user to resources that could help them to implement those enhancements. The contractor shall support EPA by developing the following content that is necessary to build the PHS-CAT:

- Questions designed to determine existing PHS capabilities
- Response choices for each question
- Statements of target capability for each PHS design element
- Statements of existing capability for each PHS design element for all possible permutations of responses to the PHS-CAT questions related to that design element
- Descriptions of potential enhancements
- Descriptions of the specific resources available to implement each enhancement

Note that a substantial portion of this content was completed during the base period of this contract, and will be provided to the contractor in an editable format. To finalize the content and prepare it for coding, the contractor shall:

- Revise the content based on review and comments provided by the EPA WACOR
- Revise the content based on peer review comments
- Revise the content to address comments generated during final product review
- Prepare the final content for coding (note that the actual coding will be performed under Task 1)

Sub-task 6.2: Implement a PHS Mini-pilot

Under this sub-task, the contractor shall support EPA in the implementation of a PHS mini-pilot. The purpose of the mini-pilot is to provide an opportunity for EPA to use some of the available PHS resources to help a utility implement elements of PHS, and evaluate the utility of the PHS resources used in this implementation. Possible focus areas for a PHS mini-pilot include: (1) identifying and coordinating with public health partners; (2) identifying and assessing existing surveillance capabilities; (3) establishing a PHS user group and joint utility/public health initiatives; and (4) developing and testing PHS alert investigation procedures. This mini-pilot will be executed as a workshop involving key personnel from the utility selected for the pilot, and representatives from their public health partner organizations. The workshop will not exceed two days. To support implementation of a PHS mini-pilot, the contractor shall:

- Assist EPA in identifying potential utilities for the mini-pilot
- Once the utility is selected, help to identify their public health partners
- Develop a project plan for the mini-pilot
- Provide technical and logistical support during implementation of the pilot
- Collect data and information during the mini-pilot
- Draft an internal report summarizing the implementation, results, and findings from the mini-pilot
- Collect video footage during the mini-pilot (coordinated under Task 2)

Sub-task 6.3: Develop PHS Outreach and Training Products

Under this sub-task, the contractor shall support EPA in developing up to six training and outreach products. EPA plans to task the contractor with developing up to two outreach products related to PHS. These products should be concise and visually appealing and may take the form of factsheets, articles, informatics, or other formats to be specified by the EPA WACOR. Final production of the finished product will be completed under Task 2. The specific topics and scope of the outreach products will be specified by the EPA WACOR through technical direction.

EPA plans to task the contractor with developing up to four training products related to PHS. Training products will be developed in the form of PowerPoint presentations that can be delivered live, delivered as a webinar, or recorded as a multi-media training module. Final production, including professional narration and graphics development as needed, will be completed under Task 2. The topics and scope of each training product will be specified by the EPA WACOR through technical direction; however, potential topics include a video tutorial that guides a utility through the process of engaging their public health partners using available EPA resources, such as the *PHS Assessment Form* and *PHS Design Guidance*.

Task 6 Deliverables: Final deliverables under this task are listed in the following table:

Sub-task	Deliverable	Due to EPA
6.1	Final version of the content for the PHS-CAT	As specified in written technical direction
6.2	PHS mini-pilot project plan	As specified in written technical direction
6.2	PHS mini-pilot report	As specified in written technical direction
6.3	Final version of PHS outreach products	As specified in written technical direction
6.3	Final version of PHS training products	As specified in written technical direction

Task 7: Sampling and Analysis (LOE 1,802)

Task 7 supports the Sampling and Analysis (S&A) component of the SRS Program. The primary objective of Task 7 is to develop S&A guidance, training materials, and outreach products.

This task requires technical staff familiar with field and laboratory methods for analysis of drinking water samples. The contractor shall support this task using personnel with excellent technical writing and product development capabilities as well as experience in designing and implementing emergency response sampling and analysis programs for water utilities. The contractor shall have experience implementing the following EPA guidance: Modules 3 and 4 of the *Response Protocol Toolbox: Planning for and Responding to Drinking Water Contamination Threats and Incidents* and *Water Security Initiative: Guidance for Building Laboratory Capabilities to Respond to Drinking Water Contamination*. The contractor shall understand the principles of field and laboratory methods described in these guidance documents. The contractor shall be experienced in the use of Water Laboratory Alliance tools such as the *Water Contaminant Information Tool*, the *Compendium of Environmental Testing Laboratories*, and other tools and databases for researching contaminant information and laboratories. The contractor shall be familiar with the rules and regulations governing drinking water monitoring at water utilities. Task 7 is divided into six sub-tasks:

1. Support development of *Hazard Awareness and Safe Work Practices Training*
2. Develop *Guidance for Establishing Baseline Contaminant Occurrence in Drinking Water Distribution Systems*
3. Support revision of *Guidance for Building Laboratory Capabilities to Respond to Drinking Water Contamination*
4. Develop the *S&A Design Guidance Document*
5. Develop Content for the *S&A Capabilities Assessment Tool*
6. Develop S&A Outreach and Training Products

Each sub-task is described below, and additional details regarding each sub-task will be provided to the contractor through written technical direction. EPA does not anticipate the need for contractor travel in support of this task.

Sub-task 7.1: Support Completion of Hazard Awareness and Safe Work Practices Training

Under this sub-task, the contractor shall support EPA in completing *Hazard Awareness and Safe Work Practices Training*. The contractor shall support development of this training by developing slides and multi-media presentations, and formatting and editing documents. The contractor shall possess the expertise and creativity necessary to develop a professional, visually appealing product.

The following materials that support this training and their status are described below:

- *Background for Water Utilities*: A brief document to provide background for utility managers on the HAZWOPER standard, the different levels of training within that standard, and how awareness level training can better prepare their employees for responding to all hazards. EPA has a complete version of this document, which will be provided to the contractor in an editable format.
- *Guidelines for Training Coordinators*: Utilities will identify a utility Training Coordinator, who will use the guidelines document to identify the units and modules of training that will be offered, employees to be trained, and qualified instructors. The Training Coordinator also will customize the training to contain relevant utility information on the Emergency Response or Distribution System Contamination Response Plan and associated procedures. This document was completed under a previous contract.
- *Five Instructor Manuals*: The training consists of five units. Each unit will have an Instructor Manual, which will contain core content, training tips, review questions, and placeholders for insertion of utility specific information. EPA has a complete version of the Unit 1 Instructor Manual, which will be provided to the contractor in an editable format. The contractor shall support development of Instructor Manuals for the remaining four units of training.
- *Supplementary Materials*: Supplementary Materials will be available to facilitate delivery of the training and to evaluate the participants and the course. Supplementary Materials include 1) Speaker Slides for each unit of training, 2) Participant Manuals, 3) Participant Evaluation Forms, 4) Course Evaluation Forms, and 5) Certificates of Completion. Supplementary Materials are graphics heavy and may require embedded video in the Speaker Slides. Unit 1 Speaker Slides, Course Evaluation and Participant Evaluation have been completed and will be provided to the contractor from EPA. The Course Evaluation Form can be used for all five units of training.

Under this sub-task, the contractor shall:

- Review, edit and format Instructor Manuals prepared by the EPA TM
- Develop Speaker Slides for Units 2 through 5
- Develop Participant Manuals for Units 1 through 5

- Develop Participant Evaluation Forms for Units 2 through 5
- Develop a Certificate of Completion Template that can be filled in with the name of the participant and the unit of training

The contractor can assume up to 3 revisions for each product.

Sub-task 7.2: Develop Guidance for Establishing Baseline Contaminant Occurrence in Drinking Water Distribution Systems

Under this sub-task, the contractor shall support EPA in developing *Guidance for Establishing Baseline Contaminant Occurrence in Drinking Water Distribution Systems*. This document will present guidance for water utilities on establishing method performance and contaminant occurrence data for field and laboratory methods. Considerations for establishing baseline data include availability of historical data, costs to implement new monitoring, data analysis, storage, retrieval, visualization, maintenance monitoring, and how baseline data can be used during response S&A. Lessons learned from the WSI pilots will be incorporated in the guidance. The EPA TM will provide an outline and document sections completed under the base period of this contract. The contractor shall:

- Complete development of the guidance document
- Address all comments from EPA and prepare the document for peer review
- Consolidate peer review comments, develop a revision plan for the document, and implement the revision plan
- Prepare a 508 compliant, PDF version of the final document for publication and posting to the WQSR Microsite

The contractor can assume up to 3 revisions for this product.

Sub-task 7.3: Support Revision of EPA Guidance for Building Laboratory Capabilities for Responding to Drinking Water Contamination

Procedures that are used during response S&A are often different from routine procedures. Under this sub-task, the contractor shall support EPA in revising the 2013 document: *Guidance for Building Laboratory Capabilities for Responding to Drinking Water Contamination*. Revision will include updating terminology that references Contamination Warning Systems, updating resources and references, adding information collection forms to help utilities evaluate partner laboratories, adding a list of procedures and documentation for emergency response, discussing a utility-specific Laboratory Response Plan, and discussing and referencing the SRS Exercise Development Toolbox. Lessons learned from the WSI pilots will be incorporated in the guidance. The EPA TM will provide an outline for document organization and content. The contractor shall:

- Provide expert review of the document outline and revise as necessary
- Develop revisions to the guidance document
- Address all comments from EPA and prepare the document for peer review
- Consolidate peer review comments, develop a revision plan for the document, and

- implement the revision plan
- Prepare a 508 compliant, PDF version of the final document for publication and posting to the WQSR Microsite

The contractor can assume up to 3 revisions for this product.

Sub-task 7.4: Develop the S&A Design Guidance Document

Under this sub-task, the contractor shall support development of a document that guides utilities in the design and implementation of the S&A Component for an SRS. This design guidance will describe minimal S&A capabilities a utility will need for a functioning S&A Component and reference supplemental guidance documents for more information. This guidance will not be started until the supplemental guidance documents described in sub-tasks 7.1 through 7.3 have been substantially completed. In order to finalize this document and prepare it for publication, the contractor shall:

- Develop the draft guidance document
- Address comments from EPA and prepare the document for external peer review
- Consolidate peer review comments, develop a revision plan for the document, and implement the revision plan
- Prepare a 508 compliant, PDF version of the final document for publication and posting to the WQSR Microsite

The contractor can assume up to 3 revisions for this product.

Sub-task 7.5: Develop Content for the S&A Capabilities Assessment Tool

Under this sub-task, the contractor shall support EPA in developing content for the S&A Capabilities Assessment Tool (S&A-CAT). The S&A-CAT is an interactive web-based tool that presents a user with a series of questions in order to assess existing S&A capabilities. The tool then compares these existing capabilities with target capabilities, recommends potential enhancements, and directs the user to resources that could help them to implement those enhancements. The contractor shall support EPA by developing the following content that is necessary to build the S&A-CAT:

- Questions designed to determine existing S&A capabilities
- Response choices for each question
- Statements of target capability for each S&A (sub) design element
- Statements of existing capability for each S&A (sub) design element for all possible permutations of responses to the S&A-CAT questions related to that (sub) design element
- Descriptions of potential enhancements
- Descriptions of the specific resources available to implement each enhancement

To finalize the content and prepare it for coding, the contractor shall:

- Revise the content based on input provided by the EPA TM

- Revise the content based on management and peer review comments
- Revise the content to address comments generated during final product review
- Prepare the final content for coding (note that the actual coding will be performed under Task 1)

Sub-task 7.6: Develop S&A Outreach and Training Products

Under this sub-task, the contractor shall support EPA in developing up to three outreach or training products. These products should be concise and visually appealing and may take the form of factsheets, articles, flyers or other formats to be specified by the EPA TM. Final production of the finished product will be coordinated with Task 2. The specific topics and scope of the outreach products will be specified by the EPA TM through technical direction.

Training products will be developed in the form of PowerPoint presentations that can be delivered live, delivered as a webinar, or recorded as a multi-media training module. Final production, including professional narration and graphics development, will be coordinated with Task 2. EPA plans to develop Unit 1 of *Hazard Awareness and Safe Work Practices Training* into an online training module. Other topics will be specified by the EPA TM through technical direction.

Task 7 Deliverables: Final deliverables under this task are listed in the following table:

Sub-task	Deliverable	Due to EPA
7.1	Final versions of <i>Hazard Awareness and Safe Work Practices Training</i> in PowerPoint, PDF and Word formats (only the PowerPoint and PDF versions need to be 508 compliant)	As specified in written technical direction
7.2	Final version of <i>Guidance for Establishing Baseline Contaminant Occurrence in Drinking Water Distribution Systems</i> in both PDF and Word formats (only the PDF needs to be 508 compliant)	As specified in written technical direction
7.3	Final version of revised <i>Guidance for Building Laboratory Capabilities for Responding to Drinking Water Contamination</i>	As specified in written technical direction
7.4	Final version of <i>S&A Design Guidance</i> document in both PDF and Word formats (only the PDF needs to be 508 compliant)	As specified in written technical direction
7.5	Final version of the content for the S&A-CAT	As specified in written technical direction
7.6	Draft final version of <i>Unit 1 Hazard Awareness and Safe Work Practices Training</i> webinar for finalization under Task 2	As specified in written technical direction
7.6	Final versions of S&A outreach products such as factsheets, flyers, articles or posters (some products may be coordinated for finalization under Task 2)	As specified in written technical direction

Task 8: Consequence Management (LOE 2,175)

Task 8 supports the Consequence Management (CM) component of the SRS Program. The primary objective of Task 8 is to develop CM guidance and training materials to support

voluntary implementation of CM by drinking water utilities and their response partners.

The contractor shall support this task with staff knowledgeable in emergency response planning as well as excellent technical writing and product development capabilities. Task 8 is divided into five sub-tasks:

1. Develop *Guidance for Developing a Distribution System Contamination Response Plan*
2. Develop the *Guidance for Developing Tools to Track Contamination in Distribution Systems* Document and Excel tool
3. Develop the *CM Design Guidance* Document
4. Develop Content for the *CM Capabilities Assessment Tool*
5. Develop CM Outreach and Training Products

Each sub-task is described below, and additional details regarding each sub-task will be provided to the contractor through written technical direction. EPA does not anticipate the need for the contractor to travel in support of this task.

Sub-task 8.1: Develop *Guidance for Developing a Distribution System Contamination Response Plan*

Under this sub-task, the contractor shall develop a guide and template for creating a Distribution System Contamination Response Plan (DSC RP). The guide should be an interactive document that leads the user through a step-wise process to develop a DSC RP. The guide should contain a downloadable, editable template for a DSC RP and should provide an explanation of the template as well as contain background information and instructions for populating each section of the DSC RP template. The template should be a shell of a complete DSC RP that will contain example text, which the user can edit to create a custom DSC RP. Development of the guide and template will leverage information contained in the *Water Security Initiative: Interim Guidance on Developing Consequence Management Plans for Drinking Water Utilities*, including sections in the body of the interim guidance document and the generic decision trees in the appendices. This guidance product will incorporate lessons learned from the WSI pilots. It will also be compliant with the latest version of the *SRS Style Guide* and terminology used in the SRS program. EPA has developed an outline and partial content for both the guide and the template, which will be provided to the contractor as editable Word documents (along with the source files for graphics contained in the documents).

In order to finalize this document and prepare it for publication, the contractor shall:

- Complete the draft guide and template
- Address all outstanding comments from EPA and prepare the documents for peer review
- Consolidate peer review comments, develop a revision plan for the documents, and implement the revision plan
- Prepare a 508 compliant, PDF version of the final documents for publication and posting

to the WQSR Microsite

Sub-task 8.2: Develop the *Guidance for Developing Tools to Track Contamination in Distribution Systems* Document and Excel Tool

Under this sub-task, the contractor shall support EPA in finalizing the guidance document *Water Quality Surveillance and Response System Guidance for Developing Tools to Track Contamination in Distribution Systems* as well as develop an Excel tool based on the document to automate many of the steps. EPA has a substantially (90%) complete draft of this document and a series of mockups and requirements for the Excel tool, which will be provided to the contractor as editable documents (along with the source files for graphics contained in the documents). In order to finalize this document and Excel tool and prepare them for publication, the contractor shall:

- Develop the Excel tool based on the document
- Update the document as necessary to be consistent with changes made during development of the Excel tool
- Address all outstanding comments from EPA and prepare the document for peer review and prepare the Excel tool for testing and peer review
- Consolidate peer review comments, develop a revision plan for the document and Excel tool, and implement the revision plan
- Prepare a 508 compliant, PDF version of the final document and a 508 compliant version of the final Excel tool for publication and posting to the WQSR Microsite

Sub-task 8.3: Develop the *CM Design Guidance* Document

Under this sub-task, the contractor shall support EPA in developing the guidance document: *Designing Consequence Management for Water Quality Surveillance and Response Systems*. This sub-task will leverage a partially updated draft of the 2008 document: *Water Security Initiative: Interim Guidance on Developing Consequence Management Plans for Drinking Water Utilities*, which will be provided to the contractor as an editable Word document (along with the source files for graphics contained in the document). This sub-task is closely linked to the product to be developed under sub-task 8.1 and the previously published *Developing Risk Communication Plans for Drinking Water Contamination Incidents* document (2013). The *CM Design Guidance* would not repeat content in these other products, but would provide a framework within which to develop CM capabilities (as a component of an SRS or as a stand-alone capability). This guidance will not be started until the products described in sub-tasks 8.1 and 8.2 have been substantially completed. In order to finalize this document and prepare it for publication, the contractor shall:

- Complete the draft guidance document leveraging information from the revised plan guidance documents under Sub-task 8.1.
- Address all comments from EPA and prepare the document for peer review
- Consolidate peer review comments, develop a revision plan for the document, and implement the revision plan
- Prepare a 508 compliant, PDF version of the final document for publication and posting

to the WQSR Microsite

Sub-task 8.4: Develop Content for the *CM Capabilities Assessment Tool*

Under this sub-task, the contractor shall support EPA in developing content for the *CM Capabilities Assessment Tool* (CM-CAT). The CM-CAT is an interactive web-based tool that presents a user with a series of questions in order to assess existing CM capabilities. These existing capabilities are compared with target capabilities, and the tool recommends potential enhancements and directs the user to resources that could help them to implement those enhancements. Work on this tool will not be started until the *CM Design Guidance* document has been substantially completed. The contractor shall support EPA by developing the following content that is necessary to build the CM-CAT:

- Questions designed to determine existing CM capabilities
- Response choices for each question
- Statements of target capability for each CM (sub) design element
- Statements of existing capability for each CM (sub) design element for all possible permutations of responses to the CAT questions related to that (sub) design element
- Descriptions of potential enhancements
- Descriptions of the specific resources available to implement each enhancement

To finalize the content and prepare it for coding, the contractor shall:

- Revise the content based on review and comments provided by the EPA TM
- Revise the content based on peer review comments
- Revise the content to address comments generated during final product review
- Prepare the final content for coding (note that the actual coding will be performed under Task 1)

Sub-task 8.5: Develop CM Outreach and Training Products

Under this sub-task, the contractor shall support EPA in developing up to three training and outreach products. EPA plans to task the contractor with developing up to two outreach products related to CM. These products should be concise and visually appealing and may take the form of factsheets, articles, informatics, or other formats to be specified by the EPA TM. Final production of the finished product will be coordinated with Task 2. The specific topics and scope of the outreach products will be specified by the EPA TM through technical direction.

EPA plans to task the contractor with developing up to two training products related to CM. Training products will be developed in the form of PowerPoint presentations that can be delivered live, delivered as a webinar, or recorded as a multi-media training module. Final production, including professional narration and graphics development, will be coordinated with Task 2. The specific topics and scope of the training products will be specified by the EPA TM through technical direction.

Task 8 Deliverables: Specific deliverables under this task are listed in the following table:

Sub-task	Deliverable	Due to EPA
8.1	Final version of guide and template for developing a Distribution System Contamination Incident Response Plan	As specified in written technical direction
8.2	Final version of Guidance for Developing Tools to Track Contamination in Distribution Systems document and Excel tool	As specified in written technical direction
8.3	Final version of the CM Design Guidance document in both PDF and Word formats (only the PDF needs to be 508 compliant)	As specified in written technical direction
8.4	Final version of the content for the CM-CAT	As specified in written technical direction
8.5	Final version of CM outreach and training products	As specified in written technical direction

V. SCHEDULE/DELIVERABLES

Detailed listings of deliverables are included for each task in Section IV.

VI. REPORTING REQUIREMENTS

1. Monthly Progress Reports (including a progress evaluation discussion)
2. Financial Reports (including the populated financial tracking spreadsheet)
3. Project Specific PQAPP

VII. GREEN MEETINGS AND CONFERENCES

The contractor shall follow the provision of EPA prescription 1523.703-1, *Acquisition of environmentally preferable meeting and conference services (May 2007)*, for the use of off-site commercial facilities for an EPA event, whether the event is a meeting, conference, training session, or other purpose. Environmental preferability is defined at FAR 2.101, and shall be used when soliciting quotes or offers for meeting/conference services on behalf of the Agency.

VIII. CONFERENCES AND WORKSHOPS

The tasks under this work assignment do not require the acquisition of "off-site" facilities for conferences and meetings as defined in the IPN 12-05. AND the events associated with this work assignment are not covered by EPA Order 1900.3 and do not require EPA Form 5170.

The contractor shall immediately alert the WACOR to any anticipated event under the work assignment which may result in incurring an estimated \$20,000 or more cost, funded by EPA,

specific to that event, meeting, training, etc. Those costs would include travel of both prime and consultant personnel, planning and facilitation costs, AV and rental of venue costs, etc. The EPA WACOR will then prepare for approval the internal paperwork for the event and will advise the contractor when appropriate signatures have been obtained. At that point, effort can proceed for the event. If the event is being sponsored by another EPA organization, the organization providing the planning is responsible for the approval.

Any event which meets the definition of a "conference," with total net expenditures greater than \$20,000, is required to submit EPA Electronic Form 5170 and Form 5170-A (with cost estimates/actuals). In the case the workflow system is down and CORs require emergency approval, they can submit EPA Form 5170 (PDF) (2pp, 93K) (with cost estimates) to conference@epa.gov.

IX. SOFTWARE APPLICATION AND ACCESSIBILITY (SECTION 508 REHABILITATION ACT AND AMENDMENTS)

Software Application files, if delivered to the Government, shall conform to the requirements relating to accessibility as detailed to the 1998 amendments to the Rehabilitation Act, particularly, but not limited to, § 1194.21 Software applications and operating systems and § 1194.22 Web-based intranet and internet information and applications. See: <http://www.section508.gov/>

Preferred text format:	MS Word, 8.0 or higher (Office 2007 or higher)
Preferred presentation format:	Power Point, Office 2007 or higher
Preferred graphics format:	Each graphic is an individual GIF file
Preferred portable format:	Adobe Acrobat, version 6.0

The WACOR shall identify which of delivered products will require 508 compliance.

QUALITY ASSURANCE SURVEILLANCE PLAN for WSD's Mission Support

Quality Assurance Surveillance Plan

The requirements contained in this WA are considered performance-based, focusing on the Agency's desired results and outcomes. The contractor shall be responsible for determining the most effective means by which these requirements will be fulfilled. In order to fulfill the requirements, the contractor shall design innovative processes and systems that can deliver the

required services in a manner that will best meet the Agency's performance objectives. This performance-based requirement represents a challenge to the contractor to develop and apply innovative and efficient approaches for achieving results and meeting or exceeding the performance objectives, measures, and standards described below. The Contractor's performance will be reflected in the positive or negative evaluation offered by the Agency in the Contractor Performance Evaluation (CPE) which is evaluated annually (per the "Contractor Performance Evaluation" clause in the contract). The WACOR shall submit a complete annual review of the areas outlined in the Quality Assurance Surveillance Plan (QASP), included in the contract, which will then be utilized by the Project Officer in preparing the overall evaluations submitted annually in response to the Contractor Performance Evaluation requirements in the contract.

Performance Requirement	Measureable Performance Standards	Surveillance Method	Incentives/ Disincentives
Management and Communications: The Contractor shall maintain contact with the EPA Contracting Officer (CO), Contract Level Contracting Officer's Representative (CL COR), and Work Assignment Contracting Officer's Representative (WACOR) throughout the performance of the contract and shall immediately bring potential problems to the attention of the EPA CL COR and appropriate WACOR. In cases where issues have a direct impact on project schedules, cost, time, or quality, the contractor shall provide options for EPA's consideration on resolving the issues or mitigating their impacts.	Any issue adversely impacting project schedules, cost, time, or quality shall be brought to the attention of the EPA CL COR and appropriate WACOR within 3 work-days of occurrence.	100% of active work assignments (WA) will be reviewed by the EPA WACORs (via the monthly progress report) to identify unreported issues. The EPA WACORs will report any issues to the EPA CL COR who will bring the issue(s) to the Contractor's attention through the CO.	<p>Two or more incidents per contract period of performance where the contractor does not meet the measureable performance standard will be considered unsatisfactory performance and will be reported as such in the CPARS Performance Evaluation System under the category of Management.</p> <p>Fewer than two incidents per contract period of performance where the contractor does not meet the measureable performance standard will be considered satisfactory performance and will be reported as such in the CPARS Performance Evaluation System under the category of Management.</p>
Cost Management and Control: The Contractor shall monitor, track, and accurately report level of effort, labor cost, other direct cost, and fee expenditures to EPA through progress reports and approved special reporting requirements. The Contractor shall assign an appropriate level of skilled personnel to all tasks, practice and encourage time management, and ensure accurate and appropriate cost control.	The contractor shall manage costs to the level of the approved cost estimate on each individual WA. The contractor shall notify the EPA WACOR, CL COR, and CO when 75% of the approved cost estimate for any particular WA is reached. If a contractor fails to manage and control cost, any resultant overrun cannot exceed the total contract obligation for that period.	100% of the active WAs under the contract will be reviewed by the EPA CL COR and appropriate WACOR monthly (via meetings, monthly progress reports & milestones established for each deliverable) to compare actual versus projected expenditures. The EPA CL COR shall review the Contractor's monthly progress reports and request the WACOR's verification of expenditures before authorizing invoice payments.	<p>If the contractor does not meet the measurable performance standards in an applicable contract period of performance it will be assigned a rating of Unsatisfactory in CPARS under the category of Cost Control.</p> <p>A satisfactory rating will be reported in the CPARS Performance Evaluation System under the category of Cost Control if the contractor meets the measureable performance standards and accurately reports the costs in the progress reports according to the requirements in the "Reports of Work" attachment to the RFP.</p>
Timeliness:	No more than 15% of all	100% of the active	If the contractor does not meet

Performance Requirement	Measureable Performance Standards	Surveillance Method	Incentives/ Disincentives
Services and deliverables shall be in accordance with schedules stated in each WA, unless amended or modified by an approved EPA action.	deliverables per WA shall be submitted more than 3 work days past the due date.	WAs/deliverables under the contract will be reviewed by the EPA CL COR/WACOR monthly (via monthly progress report & milestones established for each deliverable) to compare actual delivery dates against those approved.	<p>the measurable performance standards per WA during an applicable period of performance, it will be assigned a rating of Unsatisfactory in CPARS under the category of Schedule.</p> <p>A satisfactory rating will be reported in the CPARS Performance Evaluation System under the category of Schedule if the contractor meets the measureable performance standards.</p>
Technical Effort: The Contractor shall abide by its QMP and QAPPs for individual WAs in performing services and providing the support on this contract.	No more than 15% of deliverables and work products for any WA furnished to EPA for review by CL COR/WACOR and QAO shall require revisions to meet the requirements of the QMP and QAPP for the WA.	100% of active WAs/deliverables (and work products) will be reviewed by the EPA CL COR/WACOR to identify noncompliance issues with the QMP and QAPPs for individual WAs.	<p>If the contractor does not meet the measurable performance standards per work assignment it will be assigned a rating of Unsatisfactory in CPARS under the category of Technical (Quality of Product).</p> <p>A satisfactory rating will be reported in the CPARS Performance Evaluation System under the category of Technical (Quality of Product) if the contractor meets the measureable performance standards.</p>

EPAUnited States Environmental Protection Agency
Washington, DC 20460**Work Assignment**

Work Assignment Number

01-03

☐ Other☒ Amendment Number:

000001

Contract Number

EP-C-15-012

Contract Period 08/01/2015 To 07/31/2017

Base

Option Period Number

1

Title of Work Assignment/SF Site Name

Risk Assessment & Coordination

Contractor

CSRA LLC

Specify Section and paragraph of Contract SOW

2.1, 2.2, 2.3, 2.4, 2.5, 2.6, 2.10, 2.14, 2.18

Purpose:

☐

Work Assignment

☐

Work Assignment Close-Out

☒

Work Assignment Amendment

☐

Incremental Funding

☐

Work Plan Approval

Period of Performance

From 08/01/2016 To 07/31/2017

Comments:

The purpose of this amendment 1 to CSRA (EP-C-15-012) WA 01-03 is to place a ceiling of \$600,000 on this work assignment.

☐

Superfund

Accounting and Appropriations Data

☒

Non-Superfund

SFO

(Max 2)

☐

Note: To report additional accounting and appropriations data use EPA Form 1900-69A.

Line	DCN (Max 6)	Budget/FY (Max 4)	Appropriation Code (Max 6)	Budget Org/Code (Max 7)	Program Element (Max 9)	Object Class (Max 4)	Amount (Dollars)	(Cents)	Site/Project (Max 8)	Cost Org/Code
1										
2										
3										
4										
5										

Authorized Work Assignment Ceiling

Contract Period:

Cost/Fee:

LOE: 6,400

08/01/2015 To 07/31/2017

This Action:

0

Total:

6,400

Work Plan / Cost Estimate Approvals

Contractor WP Dated:

Cost/Fee

LOE:

Cumulative Approved:

Cost/Fee

LOE:

Work Assignment Manager Name John DeGour

Branch/Mail Code:

Phone Number: 202-564-3212

FAX Number:

(Signature)

(Date)

Project Officer Name Nancy Parrotta

Branch/Mail Code:

Phone Number: 202-564-5260

FAX Number:

(Signature)

(Date)

Other Agency Official Name Erin Ridder

Branch/Mail Code:

Phone Number: 513-487-2155

FAX Number:

(Signature)

(Date)

Contracting Official Name Sandra Stargardt-Licis

Branch/Mail Code:

Phone Number: 513-487-2006

FAX Number:

(Signature)

(Date)

**WORK ASSIGNMENT
PERFORMANCE WORK STATEMENT (PWS)**

Title: Risk Assessment and Consequence Analysis Tool Development, Improvement, Outreach / Homeland Security Coordination Activities/ Cybersecurity

Period of Performance: August 1, 2016 to July 31, 2017

PWS Sections: 2.1, 2.2, 2.3, 2.4, 2.5, 2.6, 2.10, 2.14, 2.18

Contract No. EP-C-15-012

Work Assignment: WA-01-03

LOE: 6400 hours

Work Assignment Contract Officer Representative (WACOR):

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City, State, Zip:	Washington, DC 20460

Alt WACOR: Name:	Daniel C. Schmelling
Branch:	WSD Immediate Office
Division:	Water Security Division
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Task Managers

Tasks 1,2

Name: John A. DeGour
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Tasks 2,3,4,5

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I. PURPOSE:

The purpose of this work assignment is to reduce risk and increase resilience for all hazards within the Water Sector through the following:

- Enabling the sector to better and more easily assess risks to all hazards and evaluate the cost-effectiveness of measures to reduce risks;
- Conducting risk assessment and consequence analysis tool outreach, which will increase knowledge in the water sector of ways to assess risks and consequences;
- Supporting coordination of activities between the EPA, Department of Homeland Security, and other public and private water sector stakeholders; and
- Promoting the adoption of cybersecurity best practices.

To achieve this purpose, the contractor shall be expected to do the following:

- Develop and improve Vulnerability Self-Assessment Tool (VSAT) – a water sector risk assessment tool;
- Conduct risk assessment and consequence analysis tool training and outreach;
- Support Homeland Security coordination activities; and

- Develop materials that promote water sector cybersecurity.

The outputs of this work assignment are intended for water and wastewater system owners and operators, as well as federal, state, local, tribal, and territorial officials that assist water sector facilities with participating in Water Sector infrastructure security and resilience activities.

This work assignment supports the mission of the Water Security Division (WSD) as described in the Water Security Strategy framework, which relates resources, activities, outputs, audience, short- and long- term outcomes to the WSD pillars of Prevention, Detection, Response, and Recovery. Additionally, this work assignment contributes to the commitments made in EPA's *Strategic Plan: 2011 to 2015* and EPA's *Homeland Security Strategy (2004)*. Under EPA's *Strategic Plan*, reference is made to Goal 2 (Clean and Safe Water), Objective 2.1 (Protecting Human Health), Sub-objective 2.1.1 (Water Safe to Drink), and to the Cross-Goal on homeland security. Under EPA's *Homeland Security Strategy*, reference is made to Objective 1 (Critical Infrastructure Protection).

In support of these requirements, this contract supports the nation's drinking and wastewater infrastructure, collectively known as the Water Sector, in being informed, coordinated, and prepared to prevent, detect, respond to, and recover from terrorist attack and other intentional acts, natural disasters, and other hazards (referred to as the "all hazards' approach), which may also occur, including the needs and challenges posed by natural disasters, catastrophic events, adaptation and impacts of climate change, floods, earthquakes, pandemic illness, and any other events which impact the safety and availability of our water supply.

In pursuit of these efforts, the contractor may be tasked with preparing a correlation summary comparing the results under this work assignment to the components of the Water Security Strategy framework.

II. BACKGROUND:

Presidential Preparedness Directives (PPD) 8, 21, and the Executive Order for Improving Critical Infrastructure Cyber Security are intended to strengthen and maintain the security and resilience of the Nations critical infrastructure, both physical and cyber. PPD - 21 designates the EPA as the lead agency or Sector-Specific Agency (SSA) for the Nation's Water Sector. One of many outputs related to PPD - 21 was the development of the National Infrastructure Protection Plan (NIPP) and the accompanying Sector-Specific Plans (SSPs). These plans/strategies have logically driven critical infrastructure protection initiatives towards an all-hazards (man-made and natural disasters) approach.

EPA works with the Water Sector, Federal, State, tribal and local governments, and all stakeholders to:

1. Protect the Water Sector's infrastructure from all hazards and to enhance resilience capabilities.
2. Conduct or facilitate "all-hazards" risk assessment and consequence analysis;
3. Encourage risk management strategies to reduce vulnerabilities and mitigate public health and economic impacts (consequence); and
4. Promote communication, collaboration, and information sharing and analysis.

Much work was accomplished over the past year. However critical infrastructure protection is a continuous effort, therefore more needs to be done. All-hazards related critical infrastructure protection activities are a natural extension of EPA's long-term mission to protect human health and the environment. Accordingly, EPA and its Water Sector security partners continue to work together and are implementing a strategy to identify, prioritize, and coordinate the protection of critical Water Sector infrastructure. This strategy assists in improving Water Sector awareness, preparedness and security posture, as well as increasing resilience - in a consistent, sustainable, effective, and measurable manner.

This work assignment will support the ongoing critical infrastructure protection coordination activities/initiatives that the Agency has initiated in collaboration with the Department of Homeland Security (DHS) and water sector partners. It includes development, outreach, and training on risk assessment and analysis tools, specifically the Vulnerability Self-Assessment Tool (VSAT) and Water Health and Economic Analysis Tool (WHEAT), and efforts to promote the adoption of cybersecurity best practices in the water sector.

III. QA REQUIREMENTS:

The tasks in this WA do not require environmental measurements. Consistent with the Agency's Quality Assurance (QA) requirements, the contractor does not need to supplement the Contract Level Quality Management Plan (QMP) or prepare a Project Specific Quality Assurance project Plan (PQAPP).

IV. DETAILED TASK DESCRIPTION:

All direction under this WA will be provided as written technical direction from the WACOR, Alternate WACOR, or Task Manager (TM), as appropriate. If provided first as verbal technical direction to the contractor, it will be confirmed in writing within 5 calendar days, with a copy to the CL COR and the Contracting Officer (CO), and is subject to the limitations of the technical direction contract clause. Each initial deliverable shall be provided to the EPA WACOR in draft form for review and comment. The contractor shall incorporate WACOR/TM review comments into revisions of the drafts. All drafts and final reports shall be approved by the WACOR.

The contractor shall perform the following tasks:

Task 0: Work Plan (WP), Progress Evaluations, and Monthly Progress Reports

Task Manager: John DeGour

The contractor shall develop a work plan that describes how each task will be carried out. The work plan shall include a schedule, staffing plan, level of effort (LOE), and cost estimate for each task, the contractor's key assumptions on which staffing plan and budget are based, and qualifications of proposed staff. If a subcontractor(s) is proposed and subcontractors are outside the local metropolitan area, the contractor shall include information on plans to manage work and contract costs. In addition, the work plan shall specify that a Supplemental Project Specific Quality Assurance Project Plan (SQAPP) appending the Contract QAPP or a PQAPP is not required. This task also includes monthly progress and financial reports. Monthly financial reports must include a table with the invoice LOE and cost amount broken out by the tasks in this WA.

The contractor shall develop a WP that describes how each task will be carried out. The work plan shall include a schedule, staffing plan, level of effort (LOE), and cost estimate for each task, the contractor's key assumptions on which staffing plan and budget are based, and qualifications of proposed staff. In addition, the work plan shall include the requirement that all electronic and information technology (EIT) and all EIT deliverables be Section 508 compliant in accordance with the policies referenced at <http://www.epa.gov/accessibility/>. If a subcontractor(s) is proposed and subcontractors are outside the local metropolitan area, the contractor shall include information on plans to manage work and contract costs.

In each monthly progress report, the contractor shall, at the introduction to the discussion of this WA, discuss actual progress toward achieving the purpose of this work assignment, including problems encountered, issues that may need to be resolved, and anticipated timing for completing the goals of the WA. The contractor shall provide an overview of contract projects, striving to implement efficiencies in performance when complimentary requirements are issued. The contractor shall assure that duplication of effort relative to other ongoing WA under this contract is not occurring.

The contractor shall also include any requested task level metrics to measure progress toward established goals.

Deliverables: Listed in Section V of this performance work statement.

Task 1: Water Sector Homeland Security meeting/document support

Task Manager: John DeGour

The purpose of this task is to provide Water Sector meeting and document support for Homeland Security related and resilience activities, for example CIPAC meetings. As directed by the EPA Task Manager through written technical direction, the contractor shall provide the following:

- Logistical, facilitation and administrative meeting support to include, but not limited to, facilitating and supporting meeting planning activities, delivery of meeting sessions, development of minutes and action items, and summary evaluation and report-out. The contractor shall arrange for facilities, in accordance with Agency requirements (please see Section VIII below), suggest locations, and make necessary arrangements for meetings or conferences as requested by written technical direction from the WACOR. The contractor shall identify potential speakers and participants to attend EPA sponsored events, issue invitations, and conduct pre-meeting and on-site registration activities. The contractor shall develop and assemble agendas, supplemental materials (e.g., handouts, presentations, participant list), and other preparatory activities as needed. The contractor shall facilitate sessions and provide support to invited presenters and subject matter experts as required. Work on task activities shall begin upon receipt of written technical direction from the EPA WACOR.

The contractor shall adhere to Agency requirements for reserving meeting space. Any speakers or experts identified for travel reimbursement must have a clear role in the meeting/workshop and must have consultant agreements in place.

All appropriate clearances and approvals required by Agency policy in support of any and all conference related activities and expenses, including support of meetings, conferences, training events, award ceremonies and receptions, shall be obtained by the WACOR or EPA CL COR as needed and provided to the Contracting Officer. Work under conference-related activities and expenses shall not occur until this approval is obtained and provided by the WACOR, CL COR or CO.

- Support the writing, review, and/or dissemination of documents created in relation to Homeland Security coordination activities and other related project documents as requested in written technical direction by the EPA WACOR.
- Develop information and outreach materials for the Water Sector as requested in written technical direction by the EPA WACOR. This may include, but not be limited to, the development of fact sheets, presentations, exercises, and briefings.

Deliverables: Listed in Section V of this performance work statement.

Task 2: Completion, Review, and Deployment of VSAT Web

Task Manager: Dan Schmelling/John DeGour

The contractor shall complete the development of an application of EPA's Vulnerability Self-Assessment Tool (VSAT) that is designed for use on mobile devices like tablets and iPads. Hereinafter, this application of VSAT is referred to as "VSAT Web" (note that this tool was called "VSAT Mobile" in Work Assignment (WA) 0-03 under this contract).

Specifically, the contractor shall complete the following subtasks.

Subtask 2.1: Complete the design and coding of VSAT Web

The contractor substantially completed the design and coding of VSAT Web through WA 0-03 under this contract. Under the current work assignment, the contractor shall fully complete the design and coding of this application. Major design requirements for VSAT Web are unchanged from those that EPA established with the contractor through WA 0-03. Those requirements are briefly summarized as follows:

- Simple, intuitive, and easy to use by water and wastewater system owners and operators without specialized training;
- Incorporate all major functions from the desktop application of VSAT Version 6.0;
- Allow file transfer with the desktop application of VSAT;
- Include a Water Health and Economic Analysis Tool (WHEAT) calculator for generating consequence estimates (the contractor developed WHEAT under Contract EP-C-10-060);
- Works on Android and iOS operating systems for mobile devices, as well as personal computers (PCs);
- Functions fully with all widely used Internet browsers;
- Functions off-line (without an Internet connection) after the application is downloaded;
- Provides for secure data back-up and long-term storage outside of an EPA server (e.g. on the device or a private data storage solution);
- Conforms to applicable security guidelines and includes appropriate security controls for the protection of sensitive data; and
- Deployable on an EPA server.

This subtask includes comprehensive internal testing and quality control by the contractor to ensure that the application performs as intended and that application outputs are valid within design limits. It also includes regular meetings with the EPA Task Manager for progress assessment and input on application development.

Subtask 2.2: EPA and Stakeholder Review of VSAT Web

The contractor shall produce and make available through the contractor's server a fully functioning version of VSAT Web (a "beta" version) suitable for EPA and stakeholder review. The EPA Task Manager will identify the reviewers and determine the process for review (e.g., timing of review, meetings with reviewers; comment submission). The contractor shall support this review through the following:

- Providing reviewers with access to a beta version of VSAT Web on the contractor's server;
- Developing a presentation for reviewers that explains the major features of VSAT Web and includes additional information that will facilitate review;
- Participating in up to four remote (i.e., webinar) and up to one in-person meetings with reviewers to discuss the application and solicit feedback;

- Setting up a process to receive and catalogue reviewer comments; and
- Providing responses to and recording the disposition of reviewer comments;

The EPA Task Manager will provide written technical direction to the contractor specifying any significant changes the contractor shall make to VSAT Web based on reviewer comments.

In addition to Water Sector stakeholder review of VSAT Web, EPA expects to submit VSAT Web for review and approval under the DHS SAFETY Act program. This program provides limited liability protection against terrorism-related damages for products designated as effective anti-terrorism tools. The current PC version of VSAT (version 6.0) is approved under the DHS SAFETY Act program, and EPA will seek to have this approval extended to VSAT Web. The EPA Task Manager will be responsible for initiating this review with the DHS SAFETY Act office. The contractor shall support this review by providing documentation and access to the beta version of VSAT Web as required.

Subtask 2.3: Deploy VSAT Web on an EPA Server

The contractor shall work with EPA's National Computing Center and other EPA personnel as identified by the EPA Task Manager to deploy VSAT Web on an EPA server. This deployment must ensure the following:

- Access to a fully-functional version of VSAT Web by EPA and any external stakeholder;
- Compliance with all applicable requirements for deployment on an EPA server, which the contractor shall determine in consultation with designated EPA personnel;
- Capability to record contact information for users who access VSAT Web in order to inform them of corrections and updates to the application; and
- Capability for the contractor to make corrections to and update VSAT Web as required and as directed by the EPA Task Manager.

Subtask 2.4: Correct and Update VSAT Web Post-Deployment

As specified by the EPA Task Manager through written technical direction, the contractor shall correct problems with and make updates to VSAT Web following deployment on an EPA server. This subtask is not intended to include major software updates. Rather, it is limited to fixing problems and correcting issues identified with the application by users after deployment.

Deliverables: Listed in Section V of this performance work statement.

Deliverables must be provided in draft form for EPA review and approval prior to being finalized. Multiple drafts may be required prior to EPA approval.

Subtask 2.5: Complete WHEAT methodology peer review report

The contractor shall produce a report capturing comments, and recommendations from a peer review panel of the WHEAT methodology. The contractor shall support this review through the following:

- Writing Provide a final report to include a record of reviewer comments, and recommendations on WHEAT methodology and potential paths forward for WHEAT.

Deliverables: Listed in Section V of this performance work statement.

Deliverables must be provided in draft form for EPA review and approval prior to being finalized. Multiple drafts may be required prior to EPA approval.

Task 3: VSAT Web Outreach and Training

Task Manager: Dan Schmelling

The contractor shall conduct the following outreach and training tasks for VSAT Web:

- (1) Provide written (e.g., email) and verbal (phone) technical assistance in the use of all versions of VSAT and WHEAT (e.g., VSAT Web, VSAT 6.0 and WHEAT 3.0) as directed by the EPA Task Manager. Stakeholders may contact EPA to request technical assistance with downloading or using these tools. As necessary, EPA will pass these requests to the contractor and either (a) ask the contractor to provide assistance directly to the stakeholder by email or phone or (b) ask the contractor to provide a response to EPA, who will then contact the stakeholder.
- (2) Develop outreach and training materials on VSAT Web as directed by the EPA Task Manager through written technical direction. These materials are expected to include both promotional documents (e.g., flyers, fact sheets) and educational documents (e.g., presentations for webinars or in-person training).
- (3) Conduct up to 5 webinars on VSAT Web lasting up to 90 minutes each as directed by the EPA Task Manager through written technical direction. The contractor shall be responsible for developing the webinar materials and providing technical, logistical, and facilitation support for delivering the webinars. As specified by the EPA Task Manager, these webinars may be directed towards different target audiences, such as small systems and states.
- (4) Conduct up to 2 in-person training presentations on VSAT Web as directed by the EPA Task Manager through written technical direction. These presentations would be delivered as sessions within a larger conference held by EPA or a water sector organization (i.e., the contractor would not be responsible for organizing an independent in-person meeting under this task). The contractor shall be responsible for developing the presentation materials and delivering the presentation, including travel to the presentation site if

required.

Deliverables: Listed in Section V of this performance work statement.

Deliverables must be provided in draft form for EPA review and approval prior to being finalized. Multiple drafts may be required prior to EPA approval.

Task 4: Design VSAT Web Version 2.0

Task Manager: Dan Schmelling

When directed by the EPA Task Manager through written technical direction, the contractor shall initiate the design of VSAT Web Version 2.0. A primary objective of this task will be to make VSAT Web compliant with a revised version of *AWWA J100-10 Risk and Resilience Management of Water and Wastewater Systems* (hereinafter, J100 Standard). At this time, an AWWA committee is revising the J100 Standard, with the revisions expected to be finalized in 2017 (date TBD). Work on this task will not begin until the revised J100 Standard is final.

The design of VSAT Web 2.0 shall include the following enhancements:

- (1) Compliance with the revised J100 Standard. Because the changes being made to the J100 Standard are not yet final, a complete list of the modifications necessary for VSAT Web to be compliant cannot be provided at this time. In general, EPA expects that the underlying risk analysis methodology of the J100 standard will not be changed. The revised standard is expected to include a new Utility Resilience Index, additional information on natural hazards, and a new method for calculating the likelihood of man-made threats.

EPA will provide the revised J100 Standard to the contractor when it is final. At that time, the contractor shall review it and determine the changes required to VSAT Web to be compliant. The contractor shall then provide EPA with a list of proposed changes to VSAT Web, and shall design those changes approved by the EPA Task Manager.
- (2) A man-made threat likelihood calculator. VSAT requires users to estimate the likelihood of man-made threats, but provides no tools to assist users with this estimate. The contractor shall design a calculator that operates within VSAT Web and assists users with determining the likelihood of man-made threats. This calculator may be based on a methodology in the revised J100 Standard or on an alternate methodology approved by the EPA Task Manager.
- (3) Additional enhancements as directed by EPA. The contractor shall design additional enhancements to VSAT Web as directed by the EPA Task Manager through written technical direction. EPA does not anticipate that these enhancements will entail significant modifications. Rather, they will comprise improvements based on stakeholder feedback from using the current version of the application.

EPA does not anticipate that any travel or participation in in-person stakeholder meetings will be required from the contractor for this task. The EPA Task Manager may organize a stakeholder review of VSAT Web. However, this review, if it occurs, would be conducted on-line and not in-person.

Deliverables: Listed in Section V of this performance work statement.

Deliverables must be provided in draft form for EPA review and approval prior to being finalized. Multiple drafts may be required prior to EPA approval.

Task 5: Develop Water Sector Cybersecurity Materials
Task Manager: Dan Schmelling

The purpose of this task is to develop materials that support EPA's efforts to promote the adoption of cybersecurity best practices in the water sector. As directed by the EPA Task Manager through written technical direction, the contractor shall develop the following:

- (1) Brief assessment, planning, and other documents developed in response to requests by the National Security Council, GAO, or other government entities or infrastructure sector groups. For estimating purposes, assume that up to 3 documents may be required.
- (2) Brief, targeted guidance documents for underserved segments of the water sector, such as small systems and technical assistance providers. For estimating purposes, assume that up to 3 documents may be required.
- (3) Web page design and technical assistance as needed to support hosting key water sector cybersecurity materials on a public web site.
- (4) Outreach materials that promote water sector cybersecurity. For estimating purposes, assume that up to 3 documents may be required.

EPA does not anticipate that any travel or participation in in-person stakeholder meetings will be required from the contractor for this task. The EPA Task Manager may organize a stakeholder review of VSAT Web. However, this review, if it occurs, would be conducted on-line and not in-person.

Deliverables: Listed in Section V of this performance work statement.

Deliverables must be provided in draft form for EPA review and approval prior to being finalized. Multiple drafts may be required prior to EPA approval.

V. SCHEDULE/DELIVERABLES

The schedule of deliverables is included within each specific task.

SCHEDULE/DELIVERABLES

<i>Task 0: Work Plan and Monthly Progress Reports</i>		
Objective	Deliverables	Date
0	<ul style="list-style-type: none"> • Work plan • Project Specific Quality Assurance Project Plan • monthly progress and financial reports 	In accordance with contract requirements
<i>Task 1: Complete, Review, and Deploy VSAT Web</i>		
1	<ul style="list-style-type: none"> • Meeting Support • Writing/document support • Outreach materials 	TBD by written technical direction from the EPA WACOR
<i>Task 2: Complete, Review, and Deploy VSAT Web</i>		
Subtask	Deliverables	Date
2.1	<ul style="list-style-type: none"> • VSAT Web developmental versions for EPA review; and • Completed VSAT Web application 	TBD by written technical direction
2.2	<ul style="list-style-type: none"> • Beta version of VSAT Web for stakeholder review on the contractor's server; • Presentation for reviewers that explains the major features of VSAT Web and includes additional information that will facilitate review; • Participation in up to 4 remote (i.e., webinar) and up to one in-person meetings with reviewers to discuss the application and solicit feedback; • A process to receive and catalogue reviewer comments; • Responses to and a record of the disposition of reviewer comments; and • Documentation and access to the beta version of VSAT Web as required for DHS SAFETY Act review. 	TBD by written technical direction

2.3	<ul style="list-style-type: none"> VSAT Web deployed on an EPA server 	TBD by written technical direction
2.4	<ul style="list-style-type: none"> Corrected versions of VSAT Web to address problems, if any, identified following deployment 	TBD by written technical direction
2.5	<ul style="list-style-type: none"> Provide a final report to include a record of reviewer comments, and recommendations on WHEAT methodology. 	TBD by written technical direction

Task 3: Outreach and Training on VSAT Web

Objective	Deliverables	Date
1	<ul style="list-style-type: none"> Written (e.g., email) and verbal (phone) technical assistance in the use of WHEAT and VSAT provided to stakeholders or EPA, as directed by EPA, in response to stakeholder requests for help. 	TBD by written technical direction
2	<ul style="list-style-type: none"> Outreach and training materials to carry out the activities under this task. 	TBD by written technical direction
3	<ul style="list-style-type: none"> Conduct up to 5 webinars on VSAT Web lasting up to 90 minutes each. 	TBD by written technical direction
4	<ul style="list-style-type: none"> Conduct up to 2 in-person training presentations on VSAT Web. 	TBD by written technical direction

Task 4: Design VSAT Web Version 2.0

Objective	Deliverables	Date
	<ul style="list-style-type: none"> Requirements documentation, screen mock-ups, and other documents as directed by the EPA Task Manager through written technical direction to support the design process. 	TBD by written Technical Direction

Task 5: Develop Water Sector Cybersecurity Materials

Objective	Deliverables	Date
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1	<ul style="list-style-type: none"> Up to 3 brief assessment, planning, and other documents developed in response to requests by the National Security Council, GAO, or other government entities or infrastructure sector groups. 	TBD by written technical direction
2	<ul style="list-style-type: none"> Up to 3 brief, targeted guidance documents for underserved segments of the water sector, such as small systems and technical assistance providers. 	TBD by written technical direction
3	<ul style="list-style-type: none"> Web page design and technical assistance as needed to support hosting key water sector cybersecurity materials on a public web site. 	TBD by written technical direction
4	<ul style="list-style-type: none"> Up to 3 outreach documents that promote water sector cybersecurity. 	TBD by written technical direction

VI. REPORTING REQUIREMENTS

Monthly Progress Reports (including a progress evaluation discussion)
Financial Reports

VII. GREEN MEETINGS AND CONFERENCES

The contractor shall follow the provision of EPA prescription 1523.703-1, *Acquisition of environmentally preferable meeting and conference services (May 2007)*, for the use of off-site commercial facilities for an EPA event, whether the event is a meeting, conference, training session, or other purpose. Environmental preferability is defined at FAR 2.101, and shall be used when soliciting quotes or offers for meeting/conference services on behalf of the Agency.

VIII. CONFERENCES AND WORKSHOPS

The contractor shall immediately alert the WACOR to any anticipated event under the work assignment which may result in incurring an estimated \$20,000 or more cost, funded by EPA, specific to that event, meeting, training, etc. Those costs would include travel of both prime and consultant personnel, planning and facilitation costs, including all outlays for conference preparation, AV and rental of venue costs, etc. The EPA WACOR will then prepare for approval the internal paperwork for the event and will provide it to the CO. The CO will advise the contractor when appropriate signatures have been obtained. At that point, effort can proceed for the event. If the event is being sponsored by another EPA organization, the organization providing the planning is responsible for the approval.

Any event which meets the definition of a "conference," with total net expenditures greater than \$20,000, is required to submit EPA Electronic Form 5170 and Form 5170-A (with cost estimates/actuals). In case the workflow system is down and CORs require emergency approval, they can submit EPA Form 5170 (PDF) (2pp, 93K) (with cost estimates) to conference@epa.gov.

IX. SOFTWARE APPLICATION AND ACCESSIBILITY (SECTION 508 REHABILITATION ACT AND AMENDMENTS)

Software Application files, if delivered to the Government, shall conform to the requirements relating to accessibility as detailed to the 1998 amendments to the Rehabilitation Act, particularly, but not limited to, § 1194.21 Software applications and operating systems and § 1194.22 Web-based intranet and internet information and applications. See: <http://www.section508.gov/>

Preferred text format:	MS Word, 8.0 or higher (Office 2007 or higher)
Preferred presentation format:	Power Point, Office 2007 or higher
Preferred graphics format:	Each graphic is an individual GIF file
Preferred portable format:	Adobe Acrobat, version 6.0

The WACOR shall identify which of delivered products will require 508 compliance.

QUALITY ASSURANCE SURVEILLANCE PLAN for WSD's Mission Support

Quality Assurance Surveillance Plan

The requirements contained in this WA are considered performance-based, focusing on the Agency's desired results and outcomes. The contractor shall be responsible for determining the most effective means by which these requirements will be fulfilled. In order to fulfill the requirements, the contractor shall design innovative processes and systems that can deliver the required services in a manner that will best meet the Agency's performance objectives. This performance-based requirement represents a challenge to the contractor to develop and apply innovative and efficient approaches for achieving results and meeting or exceeding the performance objectives, measures, and standards in Attachment 4 of the contract. The Contractor's performance will be reflected in the positive or negative evaluation offered by the Agency in the Contractor Performance Evaluation (CPE) which is evaluated annually (per the "Contractor Performance Evaluation" clause in the contract). The WACOR shall submit a complete annual review of the areas outlined in the Quality Assurance Surveillance Plan (QASP), included in the contract, which will then be utilized by the CLCOR in preparing the overall evaluations submitted annually in response to the Contractor Performance Evaluation requirements in the contract.

EPAUnited States Environmental Protection Agency
Washington, DC 20460**Work Assignment**

Work Assignment Number

01-03



Other



Amendment Number:

000001

Contract Number
EP-C-15-012

Contract Period 08/01/2015 To 07/31/2017

Title of Work Assignment/SF Site Name

Risk Assessment & Coordination

Contractor

CSRA LLC

Specify Section and paragraph of Contract SOW

2.1, 2.2, 2.3, 2.4, 2.5, 2.6, 2.10, 2.14, 2.18

Purpose:



Work Assignment



Work Assignment Close-Out



Work Assignment Amendment



Incremental Funding



Work Plan Approval

Period of Performance

From 08/01/2016 To 07/31/2017

Comments:

The purpose of this amendment 1 to CSRA (EP-C-15-012) WA 01-03 is to place a ceiling of \$600,000 on this work assignment.



Superfund

Accounting and Appropriations Data



Non-Superfund

SFO
(Max 2)

Note: To report additional accounting and appropriations data use EPA Form 1900-69A.

Line	DCN (Max 6)	Budget/FY (Max 4)	Appropriation Code (Max 6)	Budget Org/Code (Max 7)	Program Element (Max 9)	Object Class (Max 4)	Amount (Dollars)	(Cents)	Site/Project (Max 8)	Cost Org/Code
1										
2										
3										
4										
5										

Authorized Work Assignment Ceiling

Contract Period:

Cost/Fee:

LOE: 6,400

08/01/2015 To 07/31/2017

This Action:

0

Total:

6,400

Work Plan / Cost Estimate Approvals

Contractor WP Dated:

Cost/Fee

LOE:

Cumulative Approved:

Cost/Fee

LOE:

Work Assignment Manager Name John DeGour

Branch/Mail Code:

Phone Number: 202-564-3212

FAX Number:

(Signature)

(Date)

Project Officer Name Nancy Parrotta

Branch/Mail Code:

Phone Number: 202-564-5260

FAX Number:

(Signature)

(Date)

Other Agency Official Name Erin Ridder

Branch/Mail Code:

Phone Number: 513-487-2155

FAX Number:

(Signature)

(Date)

Contracting Official Name Sandra Stargardt-Licis

Branch/Mail Code:

Phone Number: 513-487-2006

FAX Number:

(Signature)

(Date)

EPAUnited States Environmental Protection Agency
Washington, DC 20460**Work Assignment**

Work Assignment Number

01-04

☐

Other

☐

Amendment Number:

Contract Number
EP-C-15-012

Contract Period 08/01/2015 To 07/31/2017

Title of Work Assignment/SF Site Name

Climate Ready Water Utilities

Contractor
CSC GOVERNMENT SOLUTIONS LLC

Specify Section and paragraph of Contract SOW

2.2, 2.5, 2.10, 2.15, 2.16, 3.1, 3.3, 3.4, 3.5

Purpose:

☒

Work Assignment

☐

Work Assignment Close-Out

☐

Work Assignment Amendment

☐

Incremental Funding

☐

Work Plan Approval

Period of Performance

From 08/01/2016 To 07/31/2017

Comments:

☐

Superfund

Accounting and Appropriations Data

☒

Non-Superfund

SFO

(Max 2)

☐

Note: To report additional accounting and appropriations data use EPA Form 1900-69A.

Line	DCN (Max 6)	Budget/FY (Max 4)	Appropriation Code (Max 6)	Budget Org/Code (Max 7)	Program Element (Max 9)	Object Class (Max 4)	Amount (Dollars)	(Cents)	Site/Project (Max 8)	Cost Org/Code
1										
2										
3										
4										
5										

Authorized Work Assignment Ceiling

Contract Period:

08/01/2015 To 07/31/2017

Cost/Fee:

LOE:

This Action:

Total:

Work Plan / Cost Estimate Approvals

Contractor WP Dated:

Cost/Fee

LOE:

Cumulative Approved:

Cost/Fee

LOE:

Work Assignment Manager Name Curt Baranowski

Branch/Mail Code:

Phone Number: 202-564-0636

FAX Number:

(Signature)

(Date)

Project Officer Name Nancy Parrotta

Branch/Mail Code:

Phone Number: 202-564-5260

FAX Number:

(Signature)

(Date)

Other Agency Official Name

Branch/Mail Code:

Phone Number:

(Signature)

(Date)

Contracting Official Name Donna Reinhart

Branch/Mail Code:

Phone Number: 513-487-2114

FAX Number:

(Signature)

(Date)

**WORK ASSIGNMENT (WA)
PERFORMANCE WORK STATEMENT (PWS)**

Contract No. EP-C-15-012

Work Assignment: WA 01-04

WACOR: **Name:** Curt Baranowski
 Branch: Threats, Analysis, Prevention and Preparedness Branch
 Division: Water Security Division
 Office: Office of Ground Water and Drinking Water
 Phone: (202) 564-0636
 FAX: (202) 566-0055
 E-mail: baranowski.curt@epa.gov
 Mail code: 4608T
 Street Address: 1200 Pennsylvania Avenue, NW
 City, State, and Zip: Washington, DC 20460

Alt. WACOR: **Name:** Steve Fries
 Branch: Threats, Analysis, Prevention and Preparedness Branch
 Division: Water Security Division
 Office: Office of Ground Water and Drinking Water
 Phone: (202) 564-7089
 FAX: (202) 566-0055
 E-mail: fries.steve@epa.gov
 Mail code: 4608T
 Street Address: 1200 Pennsylvania Avenue, NW
 City, State, and Zip: Washington, DC 20460

LOE: 9275

Period of Performance: August 1, 2016 to July 31, 2017

Title: Climate Ready Water Utilities Related Activities – Programming, Support, Education, Outreach, Communication, Training, Coordination, and Tracking

PWS Sections: 2.2, 2.5, 2.10, 2.15, 2.16, 3.1, 3.3, 3.4, 3.5, and 3.6.

I. PURPOSE:

The work assignment supports the U.S. Environmental Protection Agency's (EPA or Agency) efforts under its Climate Ready Water Utilities (CRWU) initiative to examine climate-related activities for the Nation's drinking water, wastewater and stormwater, hereinafter water sector, infrastructure. Water infrastructure is subject to threats from various entities, including those related to climate change. Climate change impacts will impose a daunting challenge to the water sector's ability to fulfill its public health and environmental mission. Extreme weather events, sea level rise, temperature changes, and shifting precipitation and runoff patterns, all have significant implications for sustainability of the Nation's water sector. Regardless of actions to reduce future levels of greenhouse gases, the water sector will need to develop effective adaptation strategies to address climate change impacts. At the same time, the water sector can and should contribute to mitigation efforts through increased efficiencies.

This work assignment supports the mission of the Water Security Division (WSD) as described in the Water Security Strategy framework, which relates resources, activities, outputs, audience, short- and long- term outcomes to the WSD pillars of Prevention, Detection, Response, and Recovery. Additionally, this work assignment contributes to the commitments made in EPA's *Strategic Plan: 2011 to 2015* and EPA's *Homeland Security Strategy (2004)*. Under EPA's *Strategic Plan*, reference is made to Goal 2 (Clean and Safe Water), Objective 2.1 (Protecting Human Health), Sub-objective 2.1.1 (Water Safe to Drink), and to the Cross-Goal on homeland security. Under EPA's *Homeland Security Strategy*, reference is made to Objective 1 (Critical Infrastructure Protection).

The intended audience for this project is drinking water, wastewater, and stormwater utilities, as well as other parties that support these utilities as they begin to understand and consider climate challenges to their systems, missions, and operations (i.e., Water sector associations; interdependent sectors and actors; federal agencies; local, state, and federal government).

Partners in CRWU-related coordination efforts include but are not limited to the following:

- Drinking Water and Wastewater Associations and Stakeholders;
- EPA program offices such as Office of Air and Radiation; Office of Research and Development; and various other components of Office of Water (e.g., Office of Wastewater Management, Office of Wetlands, Oceans, and Watersheds, and Drinking Water Protection Division);
- Water Utility Climate Alliance;
- Federal Agencies; and
- EPA Regional offices.

II. BACKGROUND:

The EPA's 2008 *National Water Program Strategy: Response to Climate Change* identified the need to provide drinking water and wastewater utilities with easy-to-use resources to assess the risk associated with climate change and to identify potential adaptation strategies. EPA established the CRWU initiative to enable Water sector utilities to develop and implement long-range plans that account for climate change impacts. The program recognizes that any comprehensive approach to climate change must include both adaptation and mitigation; it also seeks to engage a broad range of water sector stakeholders.

In fall of 2009, EPA formed a National Drinking Water Advisory Council (NDWAC) CRWU Working Group. The Working Group's charge was to evaluate the concept of "Climate Ready Water Utilities" and provide recommendations to the NDWAC on the development of an effective program for drinking water and wastewater utilities. In coordination with Water sector partners and stakeholders, EPA is developing a holistic framework under which climate change can be addressed at the utility level. EPA will work to implement as many of the NDWAC recommendations as possible in an effort to support utilities as they address climate change-related issues.

III. QA REQUIREMENTS:

Task 4 in this work assignment requires quality assurance. Collection, use and analysis of data will be identical to the procedures described in the Project-Specific Quality Assurance Project Plan (PQAPP) completed under task 8 of WA 03, which is consistent with the Agency's Quality Assurance (QA) requirements, appending the Contract Quality Assurance Project Plan (QAPP). Quality assurance and metadata support should adhere to Agency approved Geospatial procedures and standards, see: <https://www.epa.gov/geospatial/geospatial-policies-and-standards>. The project specific QA requirements must be addressed in the monthly progress

reports as specified below under Task 0.

IV. DETAILED TASK DESCRIPTION:

All direction under this WA will be provided as written technical direction from the WACOR, or Alternate WACOR. If provided first as verbal technical direction to the contractor, it will be confirmed in writing within 5 calendar days, with a copy to the CL COR and the Contracting Officer (CO), and is subject to the limitations of the technical direction contract clause. Each initial deliverable shall be provided to the EPA WACOR in draft form for review and comment. The contractor shall incorporate WACOR review comments into revisions of the drafts. All drafts and final reports shall be approved by the WACOR.

In alignment with the findings and recommendations within the NDWAC CRWU report, EPA will continue to develop and implement its Climate Ready Water Utilities initiative. EPA will work with its partners and stakeholders to implement this initiative. These groups include, but are not limited to, other EPA offices such as the Climate Ready Estuaries program; members of the CRWU NDWAC working group; federal, state, and local government partners; public agency actors; interdependent sectors; and water sector associations.

The contractor shall work with these partners and stakeholders to assist water sector utilities gain a better understanding of climate science and how they can implement aspects of the CRWU initiative to prepare for potential climate change-related impacts. The contractor will also support the EPA in identifying water sector climate-related research needs.

The contractor shall ensure it possesses personnel with superior technical and editorial writing skills to support all efforts. Skills must include, but are not limited to, the following: technical expertise in the subject; grammar; spelling; punctuation; flow; sentence structure; readability; technical editing; and reading-ease.

Task 0: Work Plan, Progress Evaluations, and Monthly Progress Reports

The contractor shall develop a work plan that describes how each task will be carried out. The work plan shall include a schedule, staffing plan, level of effort (LOE), and cost estimate for each task, the contractor's key assumptions on which staffing plan and budget are based, and qualifications of proposed staff. If a subcontractor is proposed and is outside the local metropolitan area, the contractor shall include information on plans to manage work and contract costs. In addition, the work plan shall include the requirement that all electronic and information technology (EIT) and all EIT deliverables be Section 508 compliant in accordance with the policies referenced at <http://www.epa.gov/accessibility/>.

In addition, the contractor shall prepare a statement indicating that this WA is a continuation of work conducted under WAs 00-03 and 00-04 and that the PQAPP developed under WA 00-03, applies to WA 01-04. The work plan shall explain that collection, use, and analysis of data in WA 01-04 will be identical to the procedures described in the PQAPP completed under WA 00-03.

This task also includes monthly progress and financial reports. The monthly progress report shall indicate, in a separate QA section, whether significant QA issues have been identified and how they are being resolved. Monthly financial reports must include a table with the invoice LOE and costs broken out by the tasks in this WA. The contractor shall immediately notify the Contract Level Contracting Officer Representative (CLCOR) and Work Assignment Contracting Officer Representative (WACOR) if any changes to the tasks involving the collection and analysis of the data occur and prepare a new PQAPP supplementing the Contract QAPP accordingly. Work on these tasks cannot proceed until the contractor receives notification of the PQAPP approval

from the CLCOR via e-mail. See specifics on deliverables below in Section V.

Task 1: Agency Document and External Document Assistance

The contractor shall support the Agency by providing technical assistance needed to gather information to write, review, or disseminate documents relative to the scope of this work assignment. The contractor shall provide additional assistance by compiling and addressing stakeholder comments and updating documents as new information becomes available, as well as reporting on metrics.

The contractor shall review information and develop outreach materials for the water sector as requested in written technical direction by the EPA WACOR. This may include, but not be limited to, the development of fact sheets, presentations, exercises, and briefings. In addition, the contractor shall support the review and dissemination of documents created by other agencies or stakeholders. EPA WACOR will provide the documents to the contractor and will specify the type of review required in written technical direction. See specifics on deliverables below in Section V.

Task 2: Scientific and Technical Support

Under this task, the contractor shall provide other scientific and technical support to facilitate and enhance EPA's CRWU efforts. Specific activities under this task will be assigned through written technical direction in response to the EPA's support needs. See specifics on deliverables below in Section V.

Task 3: Meeting Support

The contractor shall provide logistical, facilitation and administrative support including but not limited to, facilitating and supporting meeting planning activities, delivery of sessions, development of minutes and action items, and summary evaluation and report-out. The contractor shall arrange for facilities, in accordance with Agency requirements, suggest locations, and make necessary arrangements for meetings or conferences as requested by written technical direction by the WACOR. The contractor shall identify potential speakers and participants to attend EPA sponsored events, issue invitations, and conduct pre-meeting and on-site registration activities. The contractor shall develop and assemble agendas, supplemental materials (e.g., handouts, presentations, participant list), and other preparatory activities as needed. The contractor shall facilitate sessions and provide support to invited presenters as required. Work on task activities shall begin upon receipt of written technical direction from the EPA WACOR. The contractor shall adhere to Agency requirements for reserving meeting space. Any speakers or experts identified for travel reimbursement must have a clear role in the meeting/workshop and must have consultant agreements in place.

All appropriate clearances and approvals required by Agency policy in support of any and all conference related activities and expenses, including support of meetings, conferences, training events, award ceremonies and receptions, shall be obtained by the EPA WACOR as needed and provided to the Contracting Officer. Work under conference related activities and expenses shall not occur until this approval is obtained and notification provided by the CO. See specifics on deliverables below in Section V.

Task 4: Programming and Improvement of Climate Ready Tools and Maps

To continue to support the CRWU initiative the contractor shall:

- A. Support the programming and improvement of existing CRWU initiative tools such as the Climate Resilience Evaluation and Awareness Tool (CREAT) and the Extreme Events

Workshop Planner (EEWP) developed under WAs 00-03 and WA 00-04. This may require the contractor to maintain and update existing tools and maps, as well as coordinate with and support EPA's National Computer Center support;

- B. Develop a mobile (tablet) version of CREAT 3.0; and
- C. Conduct literature searches on data needed to supplement future versions of CREAT and provide a report.

See specifics on deliverables below in Section V.

Task 5: CRWU Tool Support

To continue to support CRWU initiative tools, the contractor shall address user support needs either from phone or via email, crwuhelp@epa.gov, related to the EEWP and CREAT. See specifics on deliverables below in Section V.

Task 6: CRWU Workshops, Outreach, Promotion, and Tracking (Metrics)

To continue to support CRWU initiative tools, the contractor shall:

- A. Provide outreach on CRWU initiative resources by developing content, organizing, and providing webinars on relevant and unique water sector climate ready tools and subjects; with a heavy focus on and promotion of CREAT 3.0;
- B. Support new CREAT 3.0 Utility and Regional Community Assessments and track implementation of adaptive measure(s) progress, as well as follow-up metrics tracking on the completed assessments conducted in EPA fiscal years 2015 and 2016. Furthermore, the contractor shall finalize and deliver to EPA the draft assessment reports developed during option period 1 under WA 00-04 of this contract;
- C. Support generic outreach and metrics tracking. While outreach is a part of every task, this is a placeholder for some very specific actions such as promotional materials, briefings, and updates to metrics tracking;
- D. Support Georgetown University's Water Sector Toolbox and develop linkages to our CRWU website;
- E. Develop short videos, which promote the CRWU initiative; and
- F. Support and provide climate ready workshops across the U.S. to train water sector utilities, States, associations, and environmental trainers, etc. on the use and application of CREAT 3.0 and other CRWU initiative tools. The contractor shall support these workshops with one (1) follow-up webinars for each workshop. There will be emphasis placed on conducting an EEWP-related workshop with environmental trainers, which will likely include past partners such as RCAC, RCAP, and NRWA.

See specifics on deliverables below in Section V.

Task 7: Storm Surge and Hurricane Strike Mapping and Outreach

The contractor shall continue to support and provide a climate ready and coastal storm surge workshop initiated under Task 9 of WA 00-04. The workshop will focus on training water sector utilities, States, associations, and environmental trainers, etc. on the use and application of

CREAT 3.0 and other CRWU initiative tools. The contractor shall support this workshop with one (1) follow-up webinar. Specific attention will be paid to those water sector utilities susceptible to coastal storm surge flooding. See specifics on deliverables below in Section V.

V. SCHEDULE/DELIVERABLES

Task 0 Deliverables: Work plan, Project-Specific Quality Assurance Project Plan, monthly progress and financial reports.

Task 1 Deliverables:

Draft and final documents, as well as reports that: 1) are researched and reviewed; 2) address and incorporate stakeholder comments; and 3) are appropriately updated or finalized.

The development of communication and outreach materials shall also be included in this task. For planning purposes, **assume effort on three (3) technical documents, one (1) fact sheet, two (2) presentations, two (2) exercises, and two (2) briefings, as well as the review and development of five (5) documents.** All documents will be in "10 pt. - Century Gothic" font and all draft documents will be delivered in continuous line number format.

Task 1 deliverables will be initiated by written technical direction.

Task 2 Deliverables:

These activities will address support for the Climate Ready Water Utilities initiative, which will include literature searches, as well as collecting and addressing comments. For planning purposes, **assume five (5) literature searches.**

Task 2 deliverables will be initiated by written technical direction.

Task 3 Deliverables:

The activities will include logistics for meeting and facilitation support that enables stakeholder coordination through workshops, conferences, technical sessions and training events. This includes fact sheet development, presentations, exercises and briefings. For planning purposes, **assume up to three (3) meetings at non-EPA facilities (contractor will not secure space for meetings at non-EPA facilities), three (3) local meetings at EPA facilities, and four (4) conference calls. Also, assume travel for two (2) off-site conferences.** Task 3 deliverables will be initiated by written technical direction.

Task 4 Deliverables:

To continue to support CRWU initiative tools, the contractor shall:

A. Support the programming and improvement of existing CRWU initiative tools such as CREAT and EEWP. Maintain and update existing tools and maps, as well as coordinate with and support EPA's National Computer Center support.

Task 4A. deliverables will be initiated by written technical direction.

B. Develop a framework document that illustrate and explains how CREAT 3.0 will be transformed and programmed into a mobile format. Then develop and deliver a mobile / tablet (e.g. iPad) version of CREAT 3.0 based on the July 2016 CREAT 3.0 web application deliverable under WA 00-03 of this contract. **To enable EPA to release CREAT Mobile to the public, at a minimum, the contractor shall incorporate the following features into Mobile CREAT:**

- A simple, intuitive, and easy to use tool for water and wastewater system owners and operators, not requiring specialized training for use;

- All major functions from CREAT 3.0;
- File transfer with CREAT 3.0;
- Android and iOS operating systems;
- Secure data back-up and long-term storage both on an EPA database and outside of an EPA server (e.g. on the device or a private data storage solution); and
- Applicable security guidelines and includes appropriate security controls for the protection of sensitive data.

The contractor shall achieve the following objectives under this task:

- **Develop a framework document that illustrate and explains how CREAT 3.0 will be transformed and programmed into a mobile format.** The contractor shall develop a document that will identify web application subject matter experts that understand programming, as well as EPA's web application requirements and processes. The personnel assembled to conduct similar work, in option period 0 of the contact under WAs 00-03 and 00-04, for the development of CREAT and EEWP will not be sufficient because they did not possess the proper skill sets to develop these tools or to navigate EPA's web application process;
- **Organize and use a stakeholder review group for Mobile CREAT.** The contractor shall conduct stakeholder reviews of this product, all work will be conducted on-line and not in-person;
- **Perform comprehensive testing of Mobile CREAT.** The contractor shall fully test all functions of Mobile CREAT for glitches and other problems. The contractor shall provide the EPA WACOR with a list of problems as identified during testing and documentation of how each problem was resolved;
- **Assist EPA to deploy Mobile CREAT on EPA's website.** The contractor shall assist the EPA WACOR as needed with deploying these tools on EPA's ESRI platform for use by stakeholders; and
- **Correct problems with Mobile CREAT.** The contractor shall correct any problems identified with this tool by EPA or other users after deployment.

On or before **October 31, 2016**, the contractor shall deliver the CREAT mobile framework document to EPA.

On or before **January 31, 2017**, the contractor shall deliver a beta version of Mobile CREAT for EPA's review and testing.

On or before **February 28, 2017**, the contractor shall deliver the final version of CREAT Mobile that will be ready for public release.

Task 4B. deliverables will be initiated by written technical direction.

C. Conduct literature searches on data needed to supplement future versions of CREAT and provide draft and final reports on data that will best serve the water sector community and the CREAT risk assessment process. Specific attention will be paid to data related to drought, water quantity (low flow), and wildfire. The contractor shall work with other climate and water subject matter experts (SME) internal to the federal government, as well as external climate and water subject matter experts.

On or before **March 1, 2017**, the contractor shall deliver the draft report to EPA, as well as the others SMEs involved in the process, for review and comment. The draft report, at a minimum,

shall identify data sources that will enhance CREAT 3.0, as well as illustrate and explain how this information will be programmed into the existing tool.

The contractor will address EPA and SME comments on the draft report, then provide the completed report on or before **March 31, 2017**.

Task 4C. deliverables will be initiated by written technical direction.

Task 5 Deliverables:

The contractor shall address CREAT 3.0 and EEWP user requests for technical assistance through phone or email from crwuhelp@epa.gov. For purposes of estimation, the contractor shall assume **250 requests for assistance** during the option period.

All task 5 deliverables will be initiated by written technical direction; an exact date for deliverables cannot be determined because technical assistance requests will be from users on an as needed basis throughout the option period.

Task 6 Deliverables:

To continue to support CRWU initiative, the contractor shall:

- A. Provide outreach on CRWU initiative resources by developing content, organizing, and providing three (3), one-hour webinars on relevant and unique water sector climate ready tools and subjects; with a heavy focus on and promotion of CREAT 3.0.
On or before **May 31, 2017**, the contractor shall provide these three (3) webinars. Task 6A deliverables will be initiated by written technical direction.
- B. Provide individual technical assistance, two (2) webinars per each utility / community assessment, and a final report for each of the six (6) new CREAT 3.0 Utility and Regional Community Assessments. These assessments will be similar to those conducted in option period 0, under WA 00-04. The contractor shall track and report the identification of, and where feasible, the costs associated with the implementation of adaptive measure(s) for these six CREAT 3.0 assessments. For planning purposes, assume travel for two (2) contractors for each of the six (6) onsite assessments. Individual onsite assessments will last two-days for each of the six (6) assisted utilities or communities.

On or before **June 30, 2017**, the contractor shall complete these six (6) individual assessments and the associated webinars, as well as the subsequent draft reports. EPA will comment on the draft reports and the contractor shall provide finalized reports on or before **July 15, 2017**. Task 6B deliverables will be initiated by written technical direction.

The contractor shall assist in the tracking and reporting, as well as the identification and implementation of the implementation adaptive measure(s) or obstacles encounter in implementing identified measures, of the twenty-eight (28) completed assessments conducted in EPA fiscal years 2015 and 2016. Where feasible, the costs associated with the implementation of these adaptive measures will also be tracked and reported. Task 6B deliverables will be initiated by written technical direction.

On or before **August 31, 2016**, the contractor shall finalize and deliver to EPA the five (5) draft CREAT assessment utility reports developed during option period 0, under WA 00-04, of this

contract. Task 6B deliverables will be initiated by written technical direction.

- C. Support generic outreach and metrics tracking. While outreach is a part of every task, this is a placeholder for some very specific actions such as promotional materials, briefings, and updates to metrics tracking. Task 6C deliverables will be initiated by written technical direction;
- D. Support Georgetown University's Water Sector Toolbox and develop linkages to our CRWU website. Task 6D deliverables will be initiated by written technical direction; and
- E. Develop two (2), three (3) to five (5) minute CRWU initiative promotional videos. One video will focus on the CREAT process conducted with the City of Los Angeles during option period 0, under WA 00-04. The second video will focus on promoting the CRWU initiative and its products. For planning purposes, assume two (2) trips and two (2) contractors traveling for each trip.

On or before **September 30, 2016**, the contractor shall provide draft scripts for both videos to EPA for review and comment. The contractor shall address EPA comments and finalize both scripts on or before **October 14, 2016**.

On or before **March 31, 2017**, the contractor shall finalize these 2 videos in a format that is ready for upload to EPA's YouTube site and web site posting.

- F. Support and provide five (5), one-day climate ready workshops across the U.S. to train water sector utilities, States, associations, and environmental trainers, etc. on the use and application of CREAT 3.0 and other CRWU initiative tools. The contractor shall support these workshops with one (1) follow-up webinar for each workshop. There will be emphasis placed on conducting one (1) EEWP-related workshop with environmental trainers, which will likely include past partners such as RCAC, RCAP, and NRWA.

In coordination with EPA Headquarters and Regional offices, training workshops will be developed based on similar past formats. Participants will receive training on specific climate threats to their region via subject matter experts and local case studies. Utilities will start to build a risk assessment file within CREAT 3.0. Thirty (30) to 40 participants will be trained in each workshop. For planning purposes, assume travel for three (3) contractors and two (2) subject matter experts for each workshop. Also, assume the need to acquire hotel or training space for each workshop, which will accommodate up to 45 people.

On or before **July 15, 2017**, the contractor shall provide all five (5) workshops and follow-up webinars.

Task 6F deliverables will be initiated by written technical direction.

Task 7 Deliverables:

To continue to support CRWU initiative, the contractor shall:

Provide one (1), one-day climate ready and coastal storm surge workshop, which was initiated under Task 9 of WA 00-04. The workshop will be held in Belmar, NJ on **August 10, 2016**. This workshop will focus on training water sector utilities, States, associations, and environmental

trainers, etc. on the use and application of CREAT 3.0 and other CRWU initiative tools. The contractor shall support this workshop with one (1) follow-up webinar. Specific attention will be paid to those water sector utilities susceptible to coastal storm surge flooding.

For planning purposes, assume travel for three (3) contractors and two (2) subject matter experts for the workshop. South Monmouth Regional Sewerage Authority in Belmar, NJ is supplying free meeting space for this workshop.

On or before **September 30, 2016**, the contractor shall provide this workshop's follow-up webinar.

Task 7 deliverables will be initiated by written technical direction.

TASK	ESTIMATED QUANTITY
0	12
1	15
2	5
3	12
4	NA
5	250
6	52
7	2

VI. REPORTING REQUIREMENTS

Monthly Progress Reports (including a progress evaluation discussion)
Financial Reports

VII. GREEN MEETINGS AND CONFERENCES

The contractor shall follow the provision of EPA prescription 1523.703-1, *Acquisition of environmentally preferable meeting and conference services (May 2007)*, for the use of off-site commercial facilities for an EPA event, whether the event is a meeting, conference, training session, or other purpose. Environmental preferability is defined at FAR 2.101, and shall be used when soliciting quotes or offers for meeting/conference services on behalf of the Agency.

VIII. CONFERENCES AND WORKSHOPS

The contractor shall immediately alert the WACOR to any anticipated event under the work assignment which may result in incurring an estimated \$20,000 or more cost, funded by EPA, specific to that event, meeting, training, etc. Those costs would include travel of both prime and consultant personnel, planning and facilitation costs, including all outlays for conference preparation, AV and rental of venue costs, etc. The EPA WACOR will then prepare for approval the internal paperwork for the event and will provide it to the CO. The CO will advise the contractor when appropriate signatures have been obtained. At that point, effort can proceed for the event. If the event is being sponsored by another EPA organization, the organization providing the planning is responsible for the approval.

Any event that meets the definition of a "conference," with total net expenditures greater than \$20,000, is required to submit EPA Electronic Form 5170 and Form 5170-A (with cost estimates/actuals). In the case the workflow system is down and CORs require emergency approval, they can submit EPA Form 5170 (PDF) (2pp, 93K) (with cost estimates) to conference@epa.gov.

IX. SOFTWARE APPLICATION AND ACCESSIBILITY (SECTION 508 REHABILITATION ACT AND AMENDMENTS) & FEDERAL INFORMATION TECHNOLOGY ACQUISITION REFORM ACT (FITARA).

Software Application files, if delivered to the Government, shall conform to the requirements relating to accessibility as detailed to the 1998 amendments to the Rehabilitation Act, particularly, but not limited to, § 1194.21 Software applications and operating systems and § 1194.22 Web-based intranet and internet information and applications. See: <http://www.section508.gov>

Regarding FITARA, online publications of maps will leverage EPA's GeoPlatform technical architecture, hardware and software, to the fullest extent possible for public search and discovery. Quality assurance and metadata support should adhere to Agency approved Geospatial procedures and standards, see: <https://www.epa.gov/geospatial/geospatial-policies-and-standards>. All geospatial metadata will as required by OMB and be published in EPA's Environmental Data Gateway which serves Data.gov, see: <https://edg.epa.gov/metadata/catalog/main/home.page>

Preferred text format:	MS Word, 8.0 or higher (Office 2007 or higher)
Preferred presentation format:	Power Point, Office 2007 or higher
Preferred graphics format:	Each graphic is an individual GIF file
Preferred portable format:	Adobe Acrobat, version 6.0
Preferred technology:	ESRI ArcGIS Desktop 10.4 or higher

The WACOR shall identify which of delivered products will require 508 compliance.

**QUALITY ASSURANCE SURVEILLANCE PLAN
for WSD's Mission Support**

Quality Assurance Surveillance Plan

The requirements contained in this WA are considered performance-based, focusing on the Agency's desired results and outcomes. The contractor shall be responsible for determining the most effective means by which these requirements will be fulfilled. In order to fulfill the requirements, the contractor shall design innovative processes and systems that can deliver the required services in a manner that will best meet the Agency's performance objectives. This performance-based requirement represents a challenge to the contractor to develop and apply innovative and efficient approaches for achieving results and meeting or exceeding the performance objectives, measures, and standards in Attachment 4 of the contract. The Contractor's performance will be reflected in the positive or negative evaluation offered by the Agency in the Contractor Performance Evaluation (CPE), which is evaluated annually (per the "Contractor Performance Evaluation" clause in the contract). The WACOR shall submit a complete annual review of the areas outlined in the Quality Assurance Surveillance Plan (QASP), included in the contract, which will then be utilized by the CLCOR in preparing the overall evaluations submitted annually in response to the Contractor Performance Evaluation requirements in the contract.

EPAUnited States Environmental Protection Agency
Washington, DC 20460**Work Assignment**

Work Assignment Number

01-04

☐ Other☒ Amendment Number:

000001

Contract Number
EP-C-15-012

Contract Period 08/01/2015 To 07/31/2017

Title of Work Assignment/SF Site Name

Climate Ready Water Utilities

Contractor
CSRA LLC

Specify Section and paragraph of Contract SOW

2.2, 2.5, 2.10, 2.15, 2.16, 3.1, 3.3, 3.4, 3.5

Purpose:

☐

Work Assignment

☐

Work Assignment Close-Out

☒

Work Assignment Amendment

☐

Incremental Funding

☐

Work Plan Approval

Period of Performance

From 08/01/2016 To 07/31/2017

Comments:

The purpose of this amendment 1 to CSRA (EP-C-15-012) WA 01-04 is to clarify and revise some of the tasks under this work assignment.

☐

Superfund

Accounting and Appropriations Data

☒

Non-Superfund

SFO
(Max 2)☐

Note: To report additional accounting and appropriations data use EPA Form 1900-69A.

Line	DCN (Max 6)	Budget/FY (Max 4)	Appropriation Code (Max 6)	Budget Org/Code (Max 7)	Program Element (Max 9)	Object Class (Max 4)	Amount (Dollars)	(Cents)	Site/Project (Max 8)	Cost Org/Code
1										
2										
3										
4										
5										

Authorized Work Assignment Ceiling

Contract Period:

08/01/2015 To 07/31/2017

Cost/Fee:

LOE: 9,275

This Action:

0

Total:

9,275

Work Plan / Cost Estimate Approvals

Contractor WP Dated:

Cost/Fee

LOE:

Cumulative Approved:

Cost/Fee

LOE:

Work Assignment Manager Name Curt Baranowski

Branch/Mail Code:

Phone Number: 202-564-0636

FAX Number:

(Signature)

(Date)

Project Officer Name Nancy Parrotta

Branch/Mail Code:

Phone Number: 202-564-5260

FAX Number:

(Signature)

(Date)

Other Agency Official Name Erin Ridder

Branch/Mail Code:

Phone Number: 513-487-2155

FAX Number:

(Signature)

(Date)

Contracting Official Name Sandra Stargardt-Licis

Branch/Mail Code:

Phone Number: 513-487-2006

FAX Number:

(Signature)

(Date)

EPAUnited States Environmental Protection Agency
Washington, DC 20460**Work Assignment**

Work Assignment Number

01-06

☐ Other☐ Amendment Number:Contract Number
EP-C-15-012

Contract Period 08/01/2015 To 07/31/2017

Title of Work Assignment/SF Site Name

WCIT

Contractor
CSC GOVERNMENT SOLUTIONS LLC

Specify Section and paragraph of Contract SOW

2.1, 2.2, 2.3, 2.4, 2.7, 2.8, 2.15

Purpose: ☒ Work Assignment☐ Work Assignment Close-Out☐ Work Assignment Amendment☐ Incremental Funding☐ Work Plan Approval

Period of Performance

From 08/01/2016 To 07/31/2017

Comments:

☐ Superfund

Accounting and Appropriations Data

☒ Non-SuperfundSFO
(Max 2)

Note: To report additional accounting and appropriations data use EPA Form 1900-69A.

Line	DCN (Max 6)	Budget/FY (Max 4)	Appropriation Code (Max 6)	Budget Org/Code (Max 7)	Program Element (Max 9)	Object Class (Max 4)	Amount (Dollars)	(Cents)	Site/Project (Max 8)	Cost Org/Code
1										
2										
3										
4										
5										

Authorized Work Assignment Ceiling

Contract Period:

Cost/Fee:

LOE: 0

08/01/2015 To 07/31/2017

This Action:

1,620

Total:

1,620

Work Plan / Cost Estimate Approvals

Contractor WP Dated:

Cost/Fee

LOE:

Cumulative Approved:

Cost/Fee

LOE:

Work Assignment Manager Name George Gardenier

Branch/Mail Code:

Phone Number: 202-564-3333

FAX Number:

(Signature)

(Date)

Project Officer Name Nancy Parrotta

Branch/Mail Code:

Phone Number: 202-564-5260

FAX Number:

(Signature)

(Date)

Other Agency Official Name

Branch/Mail Code:

Phone Number:

FAX Number:

(Signature)

(Date)

Contracting Official Name Donna Reinhart

Branch/Mail Code:

Phone Number: 513-487-2114

FAX Number:

(Signature)

(Date)

**WORK ASSIGNMENT
PERFORMANCE WORK STATEMENT**

Contract No: EP-C-15-012

Work Assignment: 01-06

WACOR: George Gardenier
Threats, Analysis, Prevention and Preparedness Branch
Water Security Division/Office of Water
Phone: (202) 564-3333
Email: gardenier.george@epa.gov
Mail Code: 4608T
1200 Pennsylvania Avenue, N.W.
Washington, DC 20460

Period of Performance: August 1, 2016 – July 31, 2017

Title: Water Contaminant Information Tool (WCIT)

PWS Sections: 2.1, 2.2, 2.3, 2.4, 2.7, 2.8, 2.8.1, 2.8.2, 2.8.3, 2.8.4, 2.15, 2.16, 2.17,
3.1.1-3.1.20, 3.2, 3.4, 3.5, 3.6

LOE: 1620 hours

I. PURPOSE:

The purpose of the WCIT work assignment is to assist the Agency and the Water Sector in planning for and responding to drinking water contamination threats and incidents. As a planning tool, WCIT can be used to support vulnerability assessments, emergency response plans, and the development of site-specific response guidelines. As a response tool, WCIT can provide real-time information about specific water contaminants to inform decision makers about appropriate response actions. A secondary objective of the WCIT work assignment will be to identify data gaps for priority contaminants, which will in turn identify future research needs.

To achieve these objectives, the contractor shall be expected to maintain the database and make modifications or enhancements that become necessary after deployment; register users by implementing EPA's access protocol for WCIT and addressing technical difficulties that users encounter; populate WCIT with additional contaminants; coordinate or integrate WCIT with related EPA tools and programs including providing WCIT data for use with those tools; develop outreach and training materials and conduct training.

This project provides programmatic support related to our national all hazards homeland security responsibilities by decreasing the time required to find crucial contaminant information that will

be needed during water contamination response events. WCIT is used for exercise planning to determine relevant symptoms and toxicity levels that will occur in the exercise scenario, and to determine what analytical methodologies and water treatment will be needed during the response.

This work assignment supports the mission of the Water Security Division (WSD) as described in the Water Security Strategy framework, which relates resources, activities, outputs, audience, short- and long- term outcomes to the WSD pillars of Prevention, Detection, Response, and Recovery. Additionally, this work assignment contributes to the commitments made in EPA's *Strategic Plan: 2011 to 2015* and EPA's *Homeland Security Strategy (2004)*. Under EPA's *Strategic Plan*, reference is made to Goal 2 (Clean and Safe Water), Objective 2.1 (Protecting Human Health), Sub-objective 2.1.1 (Water Safe to Drink), and to the Cross-Goal on homeland security. Under EPA's *Homeland Security Strategy*, reference is made to Objective 1 (Critical Infrastructure Protection).

Consistent with these requirements, this contract supports the nation's drinking and wastewater infrastructure, collectively known as the Water Sector, in being informed, coordinated, and prepared to prevent, detect, respond to, and recover from terrorist attacks and other intentional acts, natural disasters, and other hazards (referred to as the "all hazards" approach), which may also occur, including the needs and challenges posed by natural disasters, catastrophic events, adaptation and impacts of climate change, floods, earthquakes, pandemic illness, and any other events which impact the safety and availability of our water supply.

In pursuit of these efforts, the contractor may be tasked with preparing a correlation summary comparing the results under this work assignment to the components of the Water Security Strategy framework.

Overarching goal and metric for success: the overall goal for this work assignment continues to be increasing the number of people logging into WCIT, particularly WCIT's target audience (utilities serving over 100,000 people, state government response personnel, and EPA water teams). Most of the current 3,400+ registered users of WCIT are from this target audience, but very few are using WCIT at all. Most users registered for WCIT, but then rarely used it afterwards. Each work assignment task has a measurement of success stated in the first paragraph of the task description. The task specific measurements of success are designed to support the overall work assignment goal to increase WCIT use by its target audience.

Summary of task specific measurements of success:

Task 1: Timely registration, password updates, and basic maintenance are essential tasks when re-engaging WCIT registered users and recruiting new users.

Task 2: Addition of common water utility treatment chemicals will encourage more routine use of WCIT, and additional potential pollutants will increase the utility of WCIT for response.

Task 3: National Homeland Security Research Center (NHSRC) has generated some new water treatment and decontamination data, which will be added to WCIT.

Task 4: The hands-on training events are meant to familiarize the WCIT target audience with how to use WCIT. This familiarity is essential for the registered users to use WCIT with any kind of regularity. The WCIT exercises are to remind the current WCIT registrants how WCIT can aid them during a response event, and it will encourage more regular use for WCIT from the more dormant users.

Task 4: Development of a WCIT mobile website

II. BACKGROUND:

On June 12, 2002, President Bush signed the Public Health Security and Bioterrorism Preparedness and Response Act (the Act) into law. The Act amends the Safe Drinking Water Act and specifies actions community water systems and EPA must take to improve the security of the nation's drinking water infrastructure. One of the responsibilities of EPA under the Act is to conduct studies in the areas of prevention, detection, and response to the intentional introduction of contaminants into community water systems and source water for those systems. In addition, EPA supports development of tools, training, and technical assistance for drinking water and wastewater utilities. As part of this effort, EPA has funded the development of the Water Contaminant Information Tool (WCIT).

WCIT is an electronic database for tracking and managing the most current information from peer reviewed sources and research on contaminants of concern for water security including those related to an "all hazards" approach. Such contaminants may or may not be significant from a regulatory or operational perspective, but could have substantial adverse consequences to the public and/or utility if accidentally or intentionally introduced into the drinking water.

As currently envisioned, WCIT's current and future users are and will be EPA Program Offices and Regions, other federal organizations, water utilities, state drinking water programs, public health laboratories and officials, environmental laboratories, emergency first responders, and technical assistance providers. The collective information in WCIT will require that access be tightly controlled, yet readily available to those with a legitimate need for the information. There are many issues that will need to be addressed to protect WCIT's sensitive information while meeting the needs of each user group.

III. QA REQUIREMENTS:

Task(s) 1,2 and 3 in this work assignment require quality assurance (QA). Collection, use and analysis of data will be identical to the procedures described in the Project-Specific Quality Assurance Project Plan (PQAPP) completed under task(s) 0 of WA 00-06, consistent with the Agency's Quality Assurance (QA) requirements, appending the Contract Quality Assurance Project Plan (QAPP). The project specific QA requirements must be addressed in the monthly progress reports as specified under Task 0, below.

IV. DETAILED TASK DESCRIPTION:

All directions under this work assignment will be provided as written technical direction from the EPA Work Assignment Contracting Officer's Representative (WACOR) as appropriate. If provided first as verbal technical direction to the contractor, it will be confirmed in writing within 5 calendar days, with a copy to the CO, and is subject to the limitations of the technical direction contract clause. Each initial deliverable shall be provided to the EPA WACOR and EPA CO in draft form for review and comment. The contractor shall incorporate WACOR review comments into revisions of the drafts. All drafts and final reports shall be approved by the WACOR.

The contractor shall perform the following tasks:

Task 0: Work Plan and Monthly Progress Reports

The contractor shall develop a work plan that describes how each task will be carried out. The work plan shall include a schedule, staffing plan, level of effort (LOE), and cost estimate for each task, the contractor's key assumptions on which staffing plan and budget are based, and qualifications of proposed staff. If a subcontractor(s) is proposed and subcontractors are outside the local metropolitan area, the contractor shall include information on plans to manage work and contract costs.

In addition, the contractor shall prepare a statement indicating that this WA is a continuation of WA 00-06. The work plan shall explain that collection, use and analysis of data in this work assignment will be identical to the procedures described in the PQAPP completed under task(s) 0 of WA 00-06. This task also includes monthly progress and financial reports. The monthly progress report shall indicate, in a separate QA section, whether significant QA issues have been identified and how they are being resolved. Monthly financial reports must include a table with the invoice LOE and costs broken out by the tasks in this WA. The contractor shall immediately notify the Contract Level Contracting Officer Representative (CLCOR) and Work Assignment Contracting Officer Representative (WACOR) if any changes to the tasks involving the collection and analysis of the data occur and prepare a new PQAPP supplementing the Contract QAPP accordingly. Work on these tasks cannot proceed until the contractor receives notification of the new PQAPP approval from the CLCOR via e-mail.

Deliverables: Work plan and monthly progress and financial reports, Summary of Quality Assurance Activities and Issues by Work Assignment.

Task 1: Maintenance, registration, and enhancements to the database

The contractor shall maintain the WCIT database for all registered users, including any additional users who were a part of National Environmental Methods Index for Chemical, Biological, and Radiological Methods (NEMI-CBR) and who must now be transferred to WCIT. The measurement for success of this task is the continuous running of WCIT, timely registrations for 90% of those received, and 95% resolution of any problems identified (e.g., invalid links). The contractor shall also make system modifications as directed by the EPA WACOR that are

necessary to allow for better accessibility of the database. Maintenance and modifications to the database will be an ongoing task and are necessary to keep the WCIT database easily accessible and to address any concerns that users may have when using the database. In addition, EPA is required to update the WCIT security plan and populate and maintain the Automated System Security Evaluation and Remediation Tracking (ASSERT) database under the Federal Information Security Management Act (FISMA) as well as to update the OW Registry of EPA Applications and Databases (READ). These tasks shall be completed as part of the maintenance of the WCIT database. The contractor must be available for handling the registration and processing of user applications as outlined in the WCIT access protocol and to respond to technical difficulties, including comments sent to the WCIT feedback mailbox (hosted at EPA). EPA's protocol for user approval may need revision as directed by the EPA WACOR, which shall require making appropriate changes to the interface to accommodate these changes. The contractor shall respond directly to user questions and technical difficulties as needed, and must copy the WACOR on all correspondence. The monthly progress report shall summarize these support activities.

The following are all possible initiatives for this work assignment. Implementation of tasks shall be in accordance with written technical direction and consistent with Program priorities.

- If written technical direction is provided by the EPA WACOR, the WCIT eligible user identity may be updated to include state and/or local emergency responders. Upon expansion of the potential users for WCIT, the contractor shall continue registration protocols as defined by the WCIT access protocol.
- The contractor shall update invalid links when identified (e.g., as occurred in the WCIT Evaluation Report, April, 2010). Most of invalid links are usually related to external Web sites, and some are related to typographical errors in entering Web addresses.
- An update of the sampling and analysis tables in WCIT is needed as part of the maintenance. The analytical methods (including information from the upcoming Select Analytical Methods (SAM) 7.0) are critical to detection as well as measurement of treatment and decontamination effectiveness. Accurate information is critical for WCIT users to appropriately plan for or respond to a contamination event.
- Updates of the Fate and Transport and Infrastructure Decontamination tables in WCIT are needed to best facilitate the implementation of a decontamination strategy. WCIT shall be updated to include fate and transport information of chemical, biological and radiological agents, residuals, and decontamination agents in the environment and in chlorinated drinking water and wastewater systems. Current WCIT contaminant information containing expert judgments on fate and transport shall also be updated with empirical data.
- The contractor also shall update WCIT to disseminate near-term practical decontamination solutions to utilities as part of the implementation of the decontamination strategy. This will be accomplished by updating WCIT to provide information on using traditional techniques (i.e., those in routine use by utilities) for non-

traditional contaminants, and to provide information on the efficacy of pipe cleaning aids, such as NSF-60-certified products, on the decontamination of infrastructure.

- The contractor shall determine if there are WCIT users that are no longer eligible for WCIT membership. Some users may have moved to a new employer or retired, and may not work for an organization that is allowed access to WCIT. All WCIT users shall be emailed at their place of employment to determine whether they are still employed there. Several rounds of follow up communication may be required, and the responses shall be tracked on a spreadsheet.
- Specific activities under this task will be assigned through written technical direction in response to Water Security Division support needs, and shall be within the scope of this work assignment.

Deliverables:

- Updated invalid links in WCIT
- Maintained WCIT database for the more than 3,400 registered users and system modifications that are necessary to allow for better accessibility of the database. System modifications will be coordinated with the EPA WACOR.
- Registration of new WCIT users as defined in the WCIT access protocol; focus on expanding membership among scientific staff at the 400 largest utilities, state response, and EPA Water Teams.
- Updated access protocol to reflect the current users of the WCIT database.
- Updated WCIT security plan; ASSERT database, OW READ, and other IT system applications that are required by the OW and/or EPA. Timing of the updates to the IT applications will be established by each application.
- Updated sampling and analysis tables in WCIT. The analytical methods (including the upcoming SAM 7.0) are critical to detection as well as measurement of treatment and decontamination effectiveness.
- Information, technical expertise, or logistical support (for potential workgroup meetings) requested by the EPA WACOR upon discussions/analysis of the treatment/decontamination efficacy modification.

Task 2: Data population

Originally WCIT was conceptualized as a tool for utilities to use both for pre-planning, to understand the “landscape” of threats, and as a resource during emergency response to retrieve contaminant data. Because of this, the original contaminants in WCIT were selected from EPA’s list of priority contaminants. As WCIT expanded, additional contaminants were selected for inclusion based on other factors. Based on EPA’s written technical direction the contractor shall use the WCIT population plan to recommend the inclusion of additional contaminants in WCIT. EPA will provide the contractor with a list of the contaminants expected to be included in the database in the future, and provide updates to this list as necessary. Information from already existing tools will be leveraged to avoid unnecessary research (e.g. Contaminant Candidate List

(CCL), the Unregulated Contaminant Monitoring Rule (UCMR), NHSRC's Threat Ensemble Vulnerability Assessment (TEVA) modeling tool and SERRA (Support for Environmental Rapid Risk Assessment) Database, and the contamination warning system simulation model being developed under WSD's Water Security initiative). Based on written technical direction from the EPA WACOR, the contractor shall provide support of the data population. Examples include, but are not limited to:

- Updating the Data Population plan if requested by EPA
- Providing information per the request of EPA WACOR for potential additional contaminants to add to WCIT
- Leveraging existing tools to support analysis of potential additional contaminants.
- Updating contaminant profiles with new information from recent journal articles and other technical publications. Some profiles have not been updated since 2005.
- Populating data in WCIT for contaminants identified by the EPA WACOR.
- Update data for previously populated contaminants, as outlined in the WCIT population plan. Such updates would include the facilitation of a peer review of these data.
- Facilitating expert workgroup reviews.
- Recommending new expert reviewers.
- Drafting invitations, agendas, review charges, reminders, letters of gratitude, and other materials in support of the expert workgroup reviews.
- Keeping updated spreadsheets of current and former WCIT expert reviewers, their contact information, expertise, and any additional information that is relevant.
- Providing logistical support for the workgroups and reviewers, consistent with contract requirements. Travel and appropriate compensation shall only be provided to those reviewers with consultant agreements verifying their input into the effort under the requirement. The contractor shall, in consultation with the EPA WACOR, develop a method to verify and track the reviewer submissions, and provide documentation to EPA confirming that payment was disbursed to the reviewers.
- Developing meeting or comment summaries, along with recommended actions and their associated cost and schedule implications. These summaries might follow a formal review, a meeting that the contractor attends, or other instances where users have provided feedback.
- Compiling, reviewing, and responding to comments by the expert workgroup.
- Updating WCIT data based on EPA's review of the expert workgroup comments and the contractors' response to comments.
- Revising the WCIT population plan or Data Population Quality Assurance Project Plan as needed.
- Inserting PALs information for up to 20 contaminants provided by the Office of Research and Development as directed by EPA WACOR

Deliverables:

- Updated Data population plan.

- Provide information requested by EPA for specific contaminants that may potentially be added to the WCIT.
- Populate WCIT with new contaminant profiles as indicated in the population plan after approval by EPA.
- Update contaminant profiles for contaminants selected by the WACOR.
- Deliver meeting minutes and response to comments for expert review as needed.
- Revise WCIT Population Plan or Data Population QAPP as needed.

Task 3: Integration with other EPA or Water Sector Partner Tools, Development of Data Consistency, and Data Requests

The information for some of the categories of data listed above is, or will be, available from databases developed and housed outside of the Water Security Division (WSD). The measurement of success will be the number of WCIT profiles that reflect the final study reports published by NHSRC. Most of these publications appear to be relevant to wastewater and infrastructure decontamination. The following are some potential examples. The environmental methods for contaminants of security concern can be obtained from the National Environmental Methods Index-chemical, biological, and radiological (NEMI-CBR) database, laboratory resources can be obtained from the Laboratory Compendium, treatment methods from the Treatability Database under development by EPA's Office of Research and Development (ORD), toxicity information from the Emergency Consequence Assessment Tool (ECAT) under development by ORD, chemical warfare agent (CWA) data compiled in ORD's Chemical-Biological Helpline (CB-Helpline), National Homeland Security Research Center (NHSRC) Contaminant Data Dictionary, NHSRC Support For Environmental Rapid Risk Assessment (SERRA), and technology data developed by ORD's Technology Testing and Evaluation Program (TTEP). WCIT may also be integrated into the National Decontamination Portfolios under development by the Office of Land and Emergency Management (OLEM) and the OSC toolbox.

In these cases, the WCIT database may contain only summary information but otherwise it will refer users to the original sources of pertinent data. The purpose of this integration is two-fold. Leveraging existing data systems managed by EPA is an efficient use of EPA resources. In addition, integrating WCIT with other sources ensures that the data across EPA tools is consistent. The extent and method of integration with each tool will be determined on a case-by-case basis.

Besides relying upon other EPA tools for certain data, WCIT also provides support for several EPA water security initiatives. Examples include the WSD's emergency response training and EPA's contamination monitoring work in support of Homeland Security Presidential Directive-9. In addition, several of the other EPA tools require information from WCIT.

The contractor, per EPA WACOR written technical directions, shall work with WSD personnel to promote WCIT and other WSD web sites and tools. The contractor shall identify what parts of WCIT could reference and have linkages to other WSD tools (e.g., URL links), as well as

suggesting how other tools may be able to link to WCIT.

Under this task, and per EPA WACOR written technical direction, the contractor's duties shall include, but are not limited to:

- Review existing EPA tools and assess their potential for integration with WCIT.
- Provide written documentation describing options and recommendations for tool integration.
- Determine where URL links could be inserted into WCIT to promote other WSD web tools.

Deliverables:

- A detailed evaluation on the various EPA tools designed to address the contaminants of concern for water security. Some items to be addressed would be the need to identify the uses of these tools, audience for the tools, and overlap in efforts between databases.
- Outlined options and recommendations for integration of WCIT with other EPA tools. This will be worked on after the detailed evaluation has been compiled on the databases such that the data fields and audience have been identified for each of the databases.
- Integrate NHSRC wastewater and infrastructure decontamination studies into WCIT.
- Recommendations to integrate and support data consistency with other EPA water security tools.
- Provide requested WCIT data to other EPA water security tools as requested.

Task 4: Outreach, Communication, and Training Support

In order for WCIT to be a useful tool, its intended audience must be aware of its availability and must understand how to use it. The purpose of this task is to provide outreach, communication, and training support for WCIT. The measurement of success for this task will be to deliver at least 10 hands on trainings to our target audiences. These will be conducted by conference call, and the participants will follow the trainer while logged onto WCIT.

The contractor will implement 2 voluntary WCIT exercises during the option year. Each WCIT registrant will receive a mock drinking water contamination scenario, with a list of technical questions that can be answered by using WCIT.

The eligible users of WCIT may be updated to include state and/or local emergency responders. Upon expansion of the potential users for WCIT, the contractor will support additional and targeted outreach to the potential new community of WCIT users.

The EPA WACOR may task the contractor to carry out the following activities, or others in support of these tasks that support the general scope of this work assignment:

- Develop articles, fact sheets, press releases, newsletters, trifold, presentations, and other outreach materials.
- Develop training and training evaluation materials.
- Provide support for WCIT training, including webcasts.

- Conduct and/or facilitate training and/or webcasts. This could be independent training or it could be associated with another course, meeting or conference.
- Identify relevant existing courses and conferences to which WCIT could be added, and coordinate the addition of WCIT. These courses may be conducted by EPA or by any of the WCIT audience members.
- Coordinate with other training coordinators to incorporate WCIT into their training. This includes soliciting feedback on WCIT from course participants.
- Revise the existing WCIT communication strategy as appropriate. Update the outreach and communication plan, so that it covers a two year time frame as often abstracts are requested six or more months in advance of a meeting or workshop.
- Provide related outreach and training support as needed.
- Update the meeting-based PowerPoint presentation on training with the option for live training that can be presented at national, regional or local meetings to train utility, laboratory, or emergency response personnel on the uses of WCIT. The training would introduce users to the function of WCIT, how to use WCIT during a possible contamination incident, and how to use WCIT for planning purposes. The presentation should include notes and scripts so that it can be presented by EPA, CSC, or other personnel in a variety of settings. Incorporate the training into the WLA training center, or a similar location.
- Update the web-based training that would be available through the EPA website. This web-based training will provide WCIT training, freely available to a broad audience as their schedules permit.

Deliverables:

- Send announcement of planned WCIT Exercises to each WCIT Registrant
- Electronic newsletters to current WCIT users and those on the e-mail distribution list for WCIT updates if requested by EPA.
- Updated WCIT Fact Sheet as appropriate with discussion of recent tool enhancements and data additions per EPA WACOR direction.
- A WCIT technical paper for submission to a technical journal.
- Coordination with other training in order to incorporate WCIT as appropriate.
- Presentation materials for meetings and briefings to be attended by EPA, the contractor, and other presenting on WCIT. The audience for each meeting or briefing be identified by technical direction. Updates to WCIT can occur, which will require modifications to the standard presentation available for WCIT. Assume 5 presentations will be required, but that each presentation will only be a revision of the current presentations being used.
- Updated WCIT outreach and communication plan for FY 15/16.
- Updated meeting-based PowerPoint presentation to reflect the most recent modifications to WCIT.
- Updated web-based WCIT training.

Task 5. Mobile website for the Water Contaminant Information Tool (WCIT)

WCIT users will increasingly access the database from smart phones and/or tablet devices, and less frequently from desktop computers. It is critical that WCIT can be accessed by these devices during emergency water contamination incidents, however the desktop version of WCIT has not been tested and verified across mobile platforms and browsers. Additionally, the interface of the current version has not been optimized for mobile viewing. Improvements to mobile navigability and speed would make emergency response efforts run more smoothly. Ability to access WCIT from battery-powered and cellular devices would promote WCIT use in the field or if power was lost at a facility. The Water Security Division (WSD) has recently released a successful mobile site, "Water Utility Response on the Go," which could serve as a model for the development of a mobile-friendly WCIT website. Development of the WCIT mobile website began during the base year. Consistent with Technical Direction from the EPA WACOR, the contractor shall continue and finalize the development of a web app that will be verified to work across the desired platforms.

V. SCHEDULE/DELIVERABLES

TASK/ID	DELIVERABLE	DATE DUE TO EPA (Tentative)
Task 0: Workplan Submission, QA and Monthly Progress Reports		
	Workplan	According to contract. Revisions within 3 days of receipt of comments from the EPA WACOR
	PQAPPS for Tasks 1, 2, and 3.	Within 2 weeks of direction from the EPA WACOR, if needed
	Monthly progress reports	Monthly, 20 th day of each month.
Task 1: Maintenance, Registration and Enhancements to the Database		
	Maintenance	Ongoing through the option period
	Modifications and updates to the tool or other IT applications/requirements	Within 4 weeks of direction from the EPA WACOR
	Registration	Ongoing through the option period
	Revisions to WCIT Access Protocol, if requested	To Be Determined (TBD) via written technical direction
	Information, technical expertise, or logistical support	TBD via written technical direction
Task 2: Data Population		
	Recommendations for developing a standardized procedure for prioritizing data population efforts	TBD via written technical direction
	Documented procedure for prioritizing data population efforts (generating new profiles, updating existing profiles, completing partial profiles)	TBD via written technical direction
	Updated Data Population Plan for WCIT	TBD via written technical direction
	Documented procedure for expert or peer review of content to be added to the WCIT database (edits to existing profiles, addition of new profiles)	TBD via written technical direction

	Data for population of the WCIT database (new profiles, edits to existing profiles, or completion of partial profiles)	TBD via written technical direction
	Materials such as invitations, agendas, review charges, thank you letters or other materials in support of expert/peer review	TBD via written technical direction
	Updated list of expert/peer reviewers	Ongoing
	Meeting or content summaries following meetings with users or reviewers	1 week after each meeting.
	Response to comments reports following receipt of feedback from reviewers or work groups	2 weeks after each meeting.
	Incorporation of PALs information provided by ORD	TBD via written technical direction
	Addition of reviewed Data to the WCIT database	TBD via written technical direction
Task 3: Integration of WCIT with other EPA or Water Sector Partner Tools, Data Consistency, and Data Requests		
	Evaluation of Water Security Tools for Integration with WCIT	TBD via written technical direction
	Recommendations for integration WCIT with other Water Security Tools or databases.	TBD via written technical direction
	Coordination with the developers of new and existing tools to integrate them with WCIT.	TBD via written technical direction
	Updated documentation	TBD via written technical direction
	Provision of WCIT data for other Water Security tools.	TBD via written technical direction
Task 4: Outreach, Communication and Training Support		
	Outreach materials including fact sheets, articles, press releases	TBD via written technical direction
	Updated WCIT Training Presentations for training webcasts and conference calls.	TBD via written technical direction
	Summary report containing participant information, polling question responses and chat transcripts from up to 12 WCIT trainings, if requested.	1 week after each training.
	Abstracts and Presentations for conferences or professional meetings.	TBD via written technical direction
	Support for development of a WCIT technical paper	TBD via written technical direction
	Revised WCIT communication strategy.	TBD via written technical direction
Task 5: Mobile Website for the Water Contaminant Information Tool		
	Updated project schedule, timeline and cost estimate	TBD via written technical direction
	Mockups of WCIT mobile website	TBD via written technical direction
	Draft versions of the WCIT mobile website	TBD via written technical direction
	Revisions to WCIT mobile website based on EPA on other technical or user review	TBD via written technical direction
	Deployment of the WCIT mobile website	TBD via written technical direction

VI. REPORTING REQUIREMENTS

Monthly Progress Reports (including a progress evaluation discussion)
Financial Reports
Project Specific PQAPP (if applicable)

VII. GREEN MEETINGS AND CONFERENCES

The contractor shall follow the provision of EPA prescription 1523.703-1, *Acquisition of environmentally preferable meeting and conference services (May 2007)*, for the use of off-site commercial facilities for an EPA event, whether the event is a meeting, conference, training session, or other purpose. Environmental preferability is defined at FAR 2.101, and shall be used when soliciting quotes or offers for meeting/conference services on behalf of the Agency.

VIII. CONFERENCES AND WORKSHOPS

The contractor shall immediately alert the WACOR to any anticipated event under the work assignment which may result in incurring an estimated \$20,000 or more cost, funded by EPA, specific to that event, meeting, training, etc. Those costs would include travel of both prime and consultant personnel, planning and facilitation costs including all outlays for conference preparation, AV and rental of venue costs, etc. The EPA WACOR will then prepare for the approval of the internal paperwork for the event and will advise the contractor when appropriate signatures have been obtained. The CO will notify the contractor at that point, efforts can proceed for the event. If the event is being sponsored by another EPA organization, the organization providing the planning is responsible for the approval.

IX. SOFTWARE APPLICATION AND ACCESSIBILITY (SECTION 508 REHABILITATION ACT AND AMENDMENTS)

Software Application files, if delivered to the Government, shall conform to the requirements relating to accessibility as detailed to the 1998 amendments to the Rehabilitation Act, particularly, but not limited to, § 1194.21 Software applications and operating systems and § 1194.22 Web-based intranet and internet information and applications. See: <http://www.section508.gov/>

Preferred text format:	MS Word, 8.0 or higher (Office 2003 or higher)
Preferred presentation format:	Power Point, Office 2003 or higher
Preferred graphics format:	Each graphic is an individual GIF file
Preferred portable format:	Adobe Acrobat, version 6.0

The WACOR shall identify which of delivered products will require 508 compliance.

QUALITY ASSURANCE SURVEILLANCE PLAN
for the Water Security Division's
Technical, Analytical, and Regulatory Mission Support

Performance Work Statement

Quality Assurance Surveillance Plan

The requirements contained in this work assignment are considered performance-based, focusing on the Agency's desired results and outcomes. The contractor shall be responsible for determining the most effective means by which these requirements will be fulfilled. In order to fulfill the requirements, the contractor shall design innovative processes and systems that can deliver the required services in a manner that will best meet the Agency's performance objectives. This performance-based requirement represents a challenge to the contractor to develop and apply innovative and efficient approaches for achieving results and meeting or exceeding the performance objectives, measures, and standards described in Attachment 4 of the contract. The Contractor's performance will be reflected in the positive or negative evaluation offered by the Agency in the Contractor Performance Evaluation (CPE) which is evaluated annually (per the "Contractor Performance Evaluation" clause in the contract). The WACOR shall submit a complete annual review of the areas outlined in the Quality Assurance Surveillance Plan (QASP), included in the contract, which will then be utilized by the CLCOR in preparing the overall evaluations submitted annually in response to the Contractor Performance Evaluation requirements in the contract.

EPAUnited States Environmental Protection Agency
Washington, DC 20460**Work Assignment**

Work Assignment Number

01-07

☐ Other ☐ Amendment Number:Contract Number
EP-C-15-012

Contract Period 08/01/2015 To 07/31/2017

Title of Work Assignment/SF Site Name

Water Lab Alliance

Contractor
CSC GOVERNMENT SOLUTIONS LLC

Specify Section and paragraph of Contract SOW

2.1, 2.2, 2.3, 2.5, 2.7, 2.8, 2.9, 2.14, 2.15, 2.16

Purpose: ☒ Work Assignment☐ Work Assignment Close-Out☐ Work Assignment Amendment☐ Incremental Funding☐ Work Plan Approval

Period of Performance

From 08/01/2016 To 07/31/2017

Comments:

☐ Superfund

Accounting and Appropriations Data

☒ Non-SuperfundSFO
(Max 2)

Note: To report additional accounting and appropriations data use EPA Form 1900-69A.

Line	DCN (Max 6)	Budget/FY (Max 4)	Appropriation Code (Max 6)	Budget Org/Code (Max 7)	Program Element (Max 9)	Object Class (Max 4)	Amount (Dollars)	(Cents)	Site/Project (Max 8)	Cost Org/Code
1										
2										
3										
4										
5										

Authorized Work Assignment Ceiling

Contract Period:

Cost/Fee:

LOE: 0

08/01/2015 To 07/31/2017

This Action:

5,980

Total:

5,980

Work Plan / Cost Estimate Approvals

Contractor WP Dated:

Cost/Fee

LOE:

Cumulative Approved:

Cost/Fee

LOE:

Work Assignment Manager Name George Gardenier

Branch/Mail Code:

Phone Number: 202-564-3333

FAX Number:

(Signature)

(Date)

Project Officer Name Nancy Parrotta

Branch/Mail Code:

Phone Number: 202-564-5260

FAX Number:

(Signature)

(Date)

Other Agency Official Name

Branch/Mail Code:

Phone Number:

FAX Number:

(Signature)

(Date)

Contracting Official Name Donna Reinhart

Branch/Mail Code:

Phone Number: 513-487-2114

FAX Number:

(Signature)

(Date)

**WORK ASSIGNMENT
PERFORMANCE WORK STATEMENT**

Contract No: EP-C-15-012

Work Assignment: 01-07

Work Assignment Contract Officer Representative (WACOR):

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Period of Performance: August 1, 2016- July 31, 2017

LOE: 5980

Title: Water Laboratory Alliance

PWS Sections: 2.1,2.2,2.3,2.5,2.7,2.8,2.9,2.14,2.15,2.16,2.17,2.18,2.1-
3.1.20,3.2,3.3,3.4,3.5,3.6

I. PURPOSE:

The purpose of this work assignment is to implement the Water Laboratory Alliance (WLA), leading towards the sustainability of an alliance of laboratories to support drinking water response across a spectrum of activities including preparedness, response, remediation, and recovery.

To achieve this purpose the contractor shall be expected to provide technical support to the Environmental Protection Agency's (EPA's) continued development and implementation of the WLA. Contractor support will be required in the following areas:

- WLA Programmatic Support
- Analytical Preparedness -Full-Scale Exercise Toolkit and Exercises
- Training and Laboratory tool development for State Laboratories and Water Utilities
- Distribution and Education of analytical capabilities

II. BACKGROUND:

This work is in response to HSPD-9, which directed EPA to "build upon and expand current monitoring and surveillance programs to:

1. *Develop robust, comprehensive, and fully coordinated surveillance and monitoring systems...for...water quality that provide early detection and awareness of disease, pest or poisonous agents.*
2. *Develop nationwide laboratory networks for...water quality that integrate Federal and state laboratory resources, are interconnected, and utilize standardized diagnostic protocols and procedures."*

In response to the first task under HSPD 9, EPA proposed and initiated development of a Contaminant Warning System designated as the Water Security Initiative, now known as the Water Quality Surveillance and Response System (SRS) effort. To address the second major task under HSPD-9, EPA has established the Water Laboratory Alliance. The Water Laboratory Alliance is supported by the WLA-Response Plan which provides both the environmental laboratory and Water Sector with a national plan for analyzing a surge of drinking water and wastewater samples.

The intended audience for this project is the nation's drinking and wastewater utilities as well as the environmental laboratory sector, which performs analytical services to support them. Specifically, this work assignment is designed to conduct tasks that will support the information sharing, coordination and recovery from drinking water and wastewater contamination events. In addition, it supports the Water Sector being informed, coordinated, and prepared to prevent, detect, respond to, and recover from terrorist attacks and other hazards. Examples may include natural disasters, catastrophic events, climate change, floods, earthquakes, pandemic illness, and any other events which impact the safety and availability of our water supply.

This project supports programmatic needs related to our national all-hazards homeland security responsibilities by supporting the mission of the Water Security Division (WSD) as described in the Water Security Strategy framework, which relates resources, activities, outputs, audience, short- and long- term outcomes to the WSD pillars of Prevention, Detection, Response, and Recovery. Additionally, this work assignment contributes to the commitments made in EPA's *Strategic Plan: 2011 to 2015* and EPA's *Homeland Security Strategy (2004)*. Under EPA's *Strategic Plan*, reference is made to Goal 2 (Clean and Safe Water), Objective 2.1 (Protecting Human Health), Sub-objective 2.1.1 (Water Safe to Drink), and to the Cross-Goal on homeland security. Under EPA's *Homeland Security Strategy*, reference is made to Objective 1 (Critical Infrastructure Protection).

Other partners and external offices or agencies which should be included in coordination, and the nature of their involvement, are the Centers for Disease Control and Prevention (CDC) in order to leverage the CDC's Laboratory Response Network (LRN) infrastructure. The LRN is a system of State public health departments capable of responding quickly to an emergency event. EPA will continue to work with U.S. Department of Agriculture (USDA) and Food and Drug Administration (FDA) representatives for the Food Emergency Response Network (FERN), where appropriate, to leverage infrastructure from additional

existing laboratory networks to fill remaining gaps. EPA will continue to work with a broad sector of stakeholders including State health laboratories, State drinking water and/or environmental laboratories, drinking water utility representatives, commercial laboratories, and other Federal agencies, as appropriate, to discuss the proposed approach for the Water Laboratory Alliance and identify potential enhancements. The WLA is the water component of EPA's Environmental Response Laboratory Network (ERLN) being led by the Office of Emergency Management (OEM).

III. QA REQUIREMENTS:

Tasks 1, 2A – 2D, 3C and 4 in this work assignment do not require quality assurance (QA). Consistent with the Agency's QA requirements, the contractor does not need to supplement the Contract Quality Assurance Project Plan (QAPP) or to prepare a Project Specific Quality Assurance project Plan (PQAPP) for these tasks.

Task 2E in this Work Assignment (WA) requires quality assurance (QA). Consistent with the Agency's QA requirements, the contractor must prepare a complete Project Specific Quality Assurance Project Plan (PQAPP), to assure the quality of the data used under this WA. Work on this task cannot proceed until the contractor receives notification of PQAPP approval from the Contract Level Contracting Officer Representative (CLCOR) via e-mail. The QA requirements must be addressed in the work plan and monthly progress reports as specified under Task 0, below.

Task 3A in this work assignment requires quality assurance (QA). Consistent with the Agency's QA requirements, the contractor must prepare a complete Project Specific Quality Assurance Project Plan (PQAPP), to assure the quality of the data used under this WA. Work on this task cannot proceed until the contractor receives notification of PQAPP approval from the Contract Level Contracting Officer Representative (CLCOR) via e-mail. The QA requirements must be addressed in the work plan and monthly progress reports as specified under Task 0, below.

Task 3B in this work assignment requires quality assurance (QA). Collection, use and analysis of data will be identical to the procedures described in the **Project-Specific Quality Assurance Project Plan (PQAPP)** completed under task 6 of WA 00-07, consistent with the Agency's Quality Assurance (QA) requirements, appending the Contract Quality Assurance Project Plan (QAPP). The project specific QA requirements must be addressed in the monthly progress reports as specified under Task 0, below.

Task 5 in this work assignment requires quality assurance (QA). Collection, use and analysis of data will be identical to the procedures described in the **Project-Specific Quality Assurance Project Plan (PQAPP)** completed under task 7 of WA 00-07, consistent with the Agency's Quality Assurance (QA) requirements, appending the Contract Quality Assurance Project Plan (QAPP). The project specific QA requirements must be addressed in the monthly progress reports as specified under Task 0, below.

IV. DETAILED TASK DESCRIPTION:

All direction under this work assignment will be provided as written technical direction from the WACOR as appropriate. If provided first as verbal technical direction to the contractor, it will be confirmed in writing within 5 calendar days, with a copy to the WACOR, and is subject to the limitations of the technical directions contract clause. Each initial deliverable shall be provided to the EPA WACOR in draft form for review and comment. The contractor shall incorporate WACOR review comments into revisions of the drafts. All drafts and final reports shall be approved by the WACOR.

The contractor shall perform the following tasks:

Task 0: Work Plan, Progress Evaluations, and Monthly Progress Reports

The contractor shall develop a work plan that describes how each task will be carried out. The work plan shall include a schedule, staffing plan, level of effort (LOE), and cost estimate for each task, the contractor's key assumptions on which staffing plan and budget are based, and qualifications of proposed staff. If a subcontractor(s) is proposed and subcontractors are outside the local metropolitan area, the contractor shall include information on plans to manage work and contract costs.

In addition, the contractor shall prepare a PQAPP, noted above, and ensure the quality of primary data and/or secondary data used to complete these tasks. The work plan shall explain when the PQAPP will be submitted based on the specific data requirements of the WA. This task also includes monthly progress and financial reports. The monthly progress report shall indicate, in a separate QA section, whether significant QA issues have been identified and how they are being resolved. Monthly financial reports must include a table with the invoice LOE and costs' broken out by the tasks in this WA. Monthly reports shall reference technical direction issued to the contractor during the reporting period. LOE shall be reported by P-level and subtask with the monthly reports. Additionally, the monthly reports shall document any revisions to the estimated LOE for tasks within the Work Assignment.

Deliverables: Work plan, Project Specific Quality Assurance Project Plan, monthly progress and financial reports, Checklist for Quality Assurance Project Plans, and Summary of Quality Assurance Activities and Issues by Work Assignment

Task 1: Water Laboratory Alliance Programmatic Support

The objective of this task is to provide scientific, analytical, training and technical support to facilitate and enhance the programmatic aspects of the WLA. In addition, this task shall support the development and implementation of WLA member services. These services will be measured for success based upon how many WLA members use them and noted efficiency in the sector generated by increased knowledge of the program. Support services can include but are not limited to items such as access documents, help desk support, and creation of communication linkages. Member services will focus upon areas which promote key member benefits such as increased access to analytical methods, established basic ordering agreements for future contractual arrangements and enhanced communication with the laboratory sector.

The contractor shall also be tasked to support collaborations with other federal agencies, water utilities, laboratories and EPA regional personnel as needed to further the mission of the Water Laboratory Alliance Program. Specific activities under this task will be assigned through written technical direction in response to WLA program needs, and shall be within the scope of this work assignment. Specific items include:

A. Communication and Outreach

- i. Providing support for technical conferences and meetings. Examples include the composition of abstracts (estimated 7), presentations (estimated 20), scientific papers (estimated 4) and speeches (estimated 3).
 - ii. Support for up to 4 Member & Liaison Webcasts during the option year.
 - iii. Member & Liaison Communication: Newsletters and Emails. This may include up to 4 Member & Liaison Newsletters and up to 6 Member & Liaison Emails during the option year.
 - iv. Development of an updated communication plan and email distribution list for targeted outreach to the Emergency and Water sectors.
- B. Membership Recruitment**
- i. Support for up to 2 WLA Prospective Member Webcasts during the option year.
 - ii. Support for the development of a WLA Associate Membership category to include water utilities and other laboratories that do not meet the established membership criteria for the WLA.
- C. Membership Engagement and Retention**
- i. Support in developing a plan to support WLA members and Liaisons to present on the benefits of the WLA membership at conferences and professional meetings.
 - ii. Support for the development of a set of membership incentives to enhance the engagement of WLA members and Liaisons in the laboratory network.
- D. Additional Program and Scientific Support to WLA members and to EPA.** Following Technical Direction, these activities may include:
- i. Providing biological, chemical and information technology technical expertise.
 - ii. Generation of Memoranda of Agreement and/or Memoranda of Understanding.
 - iii. Identifying and recommending revisions to the WLA web-page as needed. This includes making sure that materials posted to the website are up to date and that links are working correctly.
 - iv. Providing general support to facilitate coordination between WLA, ERLN, FERN, LRN and other stakeholder associations.
 - v. Target and recruit laboratory participation in the WLA to ensure adequate capacity for all analytes on the WSD priority contaminant list.
 - vi. Develop a series of technical documents covering or encompassing the topics below:
 - a. General guidelines for participating within the WLA
 - b. Operational procedures for accessing the WLA within the ERLN
 - c. Management tools and/or documents that will be used to track communications and to record interactions between members of the WLA

Task 2: Analytical Preparedness – Laboratory Full Scale Exercises (AP-FSEs)

The objective of this task is to improve laboratory and water utility preparedness for drinking and wastewater contamination incidents, both for the EPA Regions and their laboratory communities. A draft version of a tool to provide water utilities and laboratories with a tool containing reference documents and planning materials, to assist the planning and conducting of Analytical-Preparedness Full Scale Exercises, the AP-FSE Toolkit, was piloted with three water utilities during the Base Year. The final outcome of the toolkit development effort shall be a web-based location where interested members of the public may access information and resources necessary to organize, implement and facilitate a laboratory exercise based upon the full scale laboratory exercise materials generated by EPA. The Analytical Preparedness Full-Scale Exercise (AP-FSE) Toolkit shall be used to continue the WLA Analytical Preparedness Full-Scale Exercise Program.

Success will be measured by the completion of materials posted and outcomes from exercises conducted using the AP-FSE Toolkit, testing the usability of the posted materials. Specific elements to be measured

include the functionality of the toolkit website and the degree to which users can follow directions to conduct a self-directed laboratory exercise. Specific activities required to meet this objective include:

A. Completion of the WLA Analytical Preparedness Full-Scale Exercise (AP-FSE Toolkit)

- i. Compiling feedback and lessons learned during the AP-FSE Toolkit pilot exercises
- ii. Revision of the toolkit based on reviewer comments and lessons learned from the pilot exercises, as well as from comments from EPA WACOR/Task Manager, Branch Chief and WSD Management.
- iii. Work within EPA's internet framework to design and develop a host web-location for the full scale exercise documents. In addition, efforts should be undertaken to broaden the scope of the ERLN/WLA help line to provide technical assistance regarding the website and exercise planning questions.
- iv. Publishing the AP-FSE Toolkit to the EPA website

B. Training and outreach for the AP-FSE Toolkit. This effort shall focus on developing promotional materials and identify opportunities for promoting the Toolkit designed to increase participant interest and highlight benefits of the tool. These activities may include:

- i. Supporting the development a webcast to instruct potential utilities or laboratories who may want to conduct their own Laboratory Full-Scale exercises on the usefulness of the toolkit
- ii. Supporting the development of flyers or fact sheets or other outreach materials

C. Updating the AP-FSE Toolkit to improve its usefulness to the water sector. This may involve working with EPA HQ, Regions, States, Laboratory Managers, Water Utilities and local emergency response partners to:

- i. Incorporate additional documents or templates to the toolkit, as appropriate
- ii. Develop new contamination scenarios to incorporate into the toolkit, consistent with the priorities of the utility community and to enable the collection of method performance data consistent with the research efforts of EPA or other Federal Agencies.
- iii. Revise any materials within the Toolkit or make technical changes to the web location and call center as necessary.

D. Technical and logistical support for AP-FSE's

- i. Work with EPA regions, States and others necessary to identify utilities that would serve as exercise controllers
- ii. Support utilities or laboratories serving as exercise controllers (up to 4 during the option year) to assist with them in planning and conducting the exercise
- iii. Develop documents that summarize lessons learned from the use of the FSE Toolkit and the call center

E. Collection of Method Performance Data During AP-FSE's

Performance data for up to two (2) analytical methods may be collected during the AP-FSE's during the option year. Support requested via Technical Direction by the EPA WACOR may include:

- i. Developing Quality Assurance Project Plans (QAPPs) to support the collection of method performance data during the Exercises
- ii. Procuring and shipping reagents, samples and consumable laboratory supplies to laboratories that are collecting method performance data during the AP-FSE's
- iii. Providing technical review of analytical methods to be used for performance data collection during AP-FSE's
- iv. Coordinating practice analyses in advance of the exercises
- v. Reviewing data and preparing related reports
- vi. Other technical and logistical support related to the collection of method performance data during the AP-FSE's

Anticipated Travel

- Up to 4 exercises. Per exercise – up to 3 personnel (2 EPA and 1 contractor) – locations TBD

Task 3: Analytical Support (Chemical and Microbiological)

The contractor shall complete any work related to finalizing the report related to the SVOC Standards Stability Study and the LC-MS Library Toolkit document, as requested by EPA through technical direction. The SVOC Standards Stability Study was attempted previously. However a due to lack of valid data over the entire timeframe of the experiment, a decision has been made to perform the study again in order to obtain valid data over the entire 6-month timeframe. The LC-MS validation study includes seven WSD priority contaminants that do not have drinking water methods and six additional WSD priority contaminants that currently are analyzed by more time consuming methodologies. A relevant *Summary Report* has been developed previously and must be finalized into a guide for laboratories on how to implement LC-MS screening, with a strong emphasis on WSD priority contaminants. Measures of success will include the degree to which the information is disseminated and the number of laboratories who access the information to develop customized SVOC standard kits for their laboratories.

In addition, the contractor shall provide support for the review or implementation of methods developed by the Office of Research and Development, as requested by EPA. Specific activities required to meet this objective include:

- A. Finalization of the SVOC Standards Stability Study Report and Flyer.** Assistance requested by EPA may include:
 - i. Providing an updated QAPP for the volunteer lab performing the study
 - ii. Providing consultation and related support to generating the revised study report after the collection of new data
 - iii. Supporting the development of an updated SVOC Study Flyer.
- B. Finalization of the Liquid Chromatography-Mass Spectrometry Library Toolkit Document,** as requested by EPA. This document is being revised in response to feedback received from EPA's Office of Research and Development, EPA WACOR, Branch Chief and WSD Management.
- C. Additional technical support** for four (4) reviews of technical documents or draft analytical methods as requested by written technical direction EPA.

Task 4: Training and Tool Development for State Laboratories and Water Utilities

The objective of this task is to familiarize WLA member laboratories, WLA users, and Water Sector stakeholders, such as first responders and emergency managers with WLA response procedures, analytical methods, sample handling recommendations, data reporting, and supporting tools. In an effort to reach a wide and diverse WLA audience to the greatest extent possible, any training courses or tools developed shall be created using a web-based format to allow for maximum use and accessibility. Progress shall be measured by the number of individuals and organizations that access and receive notice of availability of the tools and training courses regarding the WLA. The training program shall ensure that WLA member laboratories and Water Sector stakeholders can take advantage of the benefits of the WLA, and operate effectively in the event of a water contamination incident involving a biological, chemical, or radiochemical contaminant. The contractor shall assist with the development, instruction, maintenance and planning of WLA training courses. Course format will vary depending upon on the topic. Course topics fall into four categories:

- WLA Process
- Methods
- Sample Handling

- Supporting Tools

Anticipated Travel

- January – Technical support, Location TBD (1 personnel)
- April/May – Technical support, Location TBD (2 personnel)
- June – Technical support, Location TBD (2 personnel)
- July – Technical support, Location TBD (10 personnel)
- August – Laboratory Training TBD (4 personnel)

Selection and prioritization of trainings will be determined by the WLA team. Additional insight into the need for trainings and prioritization of topics will be gathered through discussions with the EPA Regions, WLA Liaisons, the Association of Public Health Laboratories' (APHL) Environmental Laboratory and Science committee, WSD Partners, and WLA Security Summit attendees.

Providing incentives for participation in trainings is a central component to eliciting participation in the WLA Training Program.

Specific activities required to meet this objective include:

- A. **Maintenance of existing materials in the WLA Training Center.** This includes support requested by EPA related to ensuring existing material is accessible on the website and up to date. (e.g., WLA resources contain working links and current contact information for POC's)
- B. **Support for the WLA Training Center's Webcast Series.** This may include any of several activities related to preparing and conducting webcasts, such as:
 - creating or revising webcast presentations and talking points
 - securing case study speakers
 - developing promotional materials,
 - drafting invitation and thank you emails
 - facilitating the webcasts
 - creating webinar certificates for participants
 - obtaining education credits for participants
 - preparing post-webinar reports including a list of participants, compiled responses to polling questions, and webinar chat transcripts.

Currently planned webcast topics include:

- i. **WLA Response Plan Tabletop Exercises** (up to 4 webcasts during the option year) based on the current scenario, and developing at least one new scenario involving a natural disaster or accidental chemical release.
- ii. **Continuity of Operations (COOP) Template Trainings** (up to 4 webcasts during the option year). This webinar is planned to be revised to make the format more interactive, and incorporate case studies.
- iii. **Liquid Chromatography-Mass Spectrometry (LC-MS) Library Toolkit** (1 webcast during the option year).
- iv. **Sampling Guidance for Unknown Contaminants** (1 webcast during the option year)
- v. **Accessing Laboratory Support Interactive Resource** (1 webcast during the option year)
- vi. **WLA Response Plan "Reality Check" Webinar** (1 webcast during the option year). This will involve drafting the presentation, recruiting participants who can share their experiences implementing the WLA-RP, and compiling feedback and lessons learned for potential revisions to the WLA Response Plan.

- C. Finalizing Training Tools and Documents**, as requested by EPA. All revisions shall include comments received from EPA WACOR/Task Manager, Branch Chief and WSD Management. These may include:

- Accessing Laboratory Support Interactive Training Resource
- Sampling Guidance for Unknown Contaminants.

Task 5. Support for EPA Office of Ground Water and Drinking Water's Technical Support Center

Activity Description

The Contractor shall provide technical support to TSC by assisting with evaluation of laboratory corrective actions.

Purpose

The purpose of this support is to advance equivalence between State and Federal laboratory certification for *Cryptosporidium* analysis per 40 CFR 141.705.

Anticipated LOE: 115 hrs

ODC

None anticipated.

V. SCHEDULE/DELIVERABLES:

TASK NO.	DELIVERABLE	DATE DUE TO EPA (Tentative)
Task 0: Workplan Submission, QA and Monthly Progress Reports		
	Workplan, budget, and QA supplemental (AP-FSE and SVOC)	According to contract.
	Monthly progress reports	Monthly, 20 th day of each month.
Task 1: WLA Programmatic Support		
Task 1A: Communication and Outreach		
1A.i: Support for EPA Abstracts, Posters/Presentations and In-Person Outreach		
	Support for Abstracts	To Be Determined (TBD)
	Support for Posters or Conference Presentations	TBD via written technical direction
1A.ii: Support for Member & Liaison Webcasts		
	Post-webinar report outlining metrics, participants, polling question responses and chat transcripts for up to 4 Member and Liaison Webcasts	1 week after each webcast
	Updated Member & Liaison Webcast presentations, if requested	TBD via written technical direction
1A.iii: Member and Liaison Communications: Emails and Newsletters		
	Up to 4 Member and Liaison Newsletters per year	October 31, 2016 January 31, 2017 May 5, 2017 July 31, 2017
	Up to 6 Member and Liaison Emails per year	September 30, 2016 November 30, 2016

		February 28, 2017 March 31, 2017 May 31, 2017 June 30, 2017
1A.iv: Communication Strategy for Targeted Outreach		
	Updated Communication Plan	TBD via written technical direction
Task 1B: Membership Recruitment		
1B.i: Support for Prospective Member Webcasts		
	Post-webinar report outlining metrics, participants, polling question responses and chat transcripts for up to 2 Prospective Member Webcasts	1 week after each webcast
	Revised Prospective Member Webcast presentations, if requested	TBD via written technical direction
1B.ii: WLA Associate Member Category		
	List of potential members of a workgroup to discuss the potential associate members in and benefits of associate membership	TBD via written technical direction
	List of potential candidates for "associate membership" in the WLA	TBD via written technical direction
	List of potential benefits of "associate membership" in the WLA	TBD via written technical direction
	Meeting and call summaries, workgroup reports, and additional support, as requested.	TBD via written technical direction
Task 1C: Membership Engagement and Retention		
1C.i: Support for Members and Liaisons to present on the WLA professional meetings		
	Decision criteria for selecting which members and liaisons to provide presentation support	September 30, 2016
	PPT slides for incorporation into Prospective Member and Member & Liaison webcasts,	September 30, 2016
	Text to include in WLA Outreach Newsletters and Emails	September 30, 2016
1C.ii: Development of a set of membership incentives to increase member retention		
	List of potential membership incentives	October 31, 2016
	Presentation slides for incorporation into the Member & Liaison and Prospective Member Webcasts	November 30, 2016
	Text to include in WLA Outreach Newsletters and Emails	January 18, 2017
Task 1D: Additional Scientific and Program Support to EPA and WLA Members		
	Ad hoc additional program support requested by EPA WACOR	TBD via written technical direction
Task 2: Analytical Preparedness Full-Scale Exercises		
Task 2A: Completion of the WLA Analytical Preparedness Full-Scale Exercise Toolkit		
	Compiled Feedback from AP-FSE Pilot Exercises	September 30, 2016
	Response to Comments document including list of revisions that will be made based on user feedback	September 30, 2016
	Revised AP-FSE Toolkit based on Pilot Exercises	November 1, 2016
	Additional Revisions based on TAPP and WSD Management Feedback	September 30, 2016
	Finalized AP-FSE Toolkit for publication on EPA	September 30, 2016

	Website	
Task 2B: Training and Outreach for the AP-FSE Toolkit		
	Revised PowerPoint presentation for AP-FSE Training Webinars	November 30, 2016
	Post-webinar report outlining metrics, participants, polling question responses and chat transcripts for up to 4 AP-FSE Training Webcasts	1 week after each webcast
	Text to include in WLA Emails and Newsletters	November 30, 2016
	Flyer/Fact Sheet on the AP-FSE Toolkit	October 31, 2016
Task 2C: Updates to the WLA Analytical Preparedness Full-Scale Exercise Toolkit		
	Additional Templates to include in the toolkit	TBD
	Radiological Scenario to include in the Toolkit	November 30, 2016
	Additional Biological Scenario to include in the Toolkit	October 31, 2016
Task 2D: Technical and Logistical Support for AP-FSE's		
	List of potential utilities/labs to act as Exercise Controllers	September 30, 2016
	Planning call summaries, as requested	1 week after each planning call
	Compiled Contractor notes from the AP-FSE's	2 weeks after each exercise
	Additional exercise planning and logistical deliverables, as requested	TBD via written technical direction
	QAPP(s) for collecting method performance data during Full-Scale Exercises	TBD via written technical direction
Task 3: Analytical Support (Chemical and Microbiological)		
Task 3A: Finalization of the SVOC Standards Stability Study and Flyer		
	QAPP for SVOC Standards Stability Study	TBD via written technical direction
	Revised version of the SVOC Standards Stability Report	July 31, 2017
	Revised version of the SVOC Standards Stability Study Flyer	July 31, 2017
Task 3B: Finalization of the Liquid Chromatography-Mass Spectrometry Library Toolkit Document		
	Revised version of the LC-MS Library Toolkit Document	September 30, 2016
Task 3C: Additional Chemical and Microbiological Support		
	Ad hoc support for method reviews or other chemical or microbiological support requested by EPA	TBD via written technical direction
Task 4: Training and Tool Development for State Laboratories and Water Utilities		
Task 4A: Maintenance of Existing Materials in the WLA Training Center		
	Support requested by EPA related to ensuring existing material is accessible on the website and up to date. (e.g., WLA resources contain working links and current contact information for POC's)	TBD via written technical direction
Task 4B: Training Center Webcast Series		
4B.i: WLA Response Plan Tabletop Exercise Webcasts		
	Post-webinar report outlining metrics, participants, polling question responses and chat transcripts for up	1 week after each webinar

	to 4 WLA-RP TTX Webcasts	
	New WLA-RP TTX Presentation including at least one new scenario (natural disaster or accidental chemical release)	TBD via written technical direction
4B.ii: Continuity-of-Operations Plan (COOP) Template Webcasts		
	Post-webinar report outlining metrics, participants, polling question responses and chat transcripts for up to 4 COOP Template Webcasts	1 week after each webinar
	Revised COOP Template webcast presentation with talking points updating the format to make it more interactive, and including a case study from a user who has used the template to develop a COOP.	January 4, 2017
4C.iii Liquid Chromatography-Mass Spectrometry Library Toolkit Webcast		
	Revised presentation for the LC-MS Toolkit Webcast	TBD via written technical direction
	Post-webinar report outlining metrics, participants, polling question responses and chat transcripts for up to 4 COOP Template Webcasts	1 week after the webcast
4C.iv: Sampling Guidance for Unknown Contaminants Webcast		
	Revised webinar presentation with talking points	TBD via written technical direction
	Post-webinar report outlining metrics, participants, polling question responses and chat transcripts for the Accessing Laboratory Support Webcast	
4C.v: Accessing Laboratory Support Interactive Training Webcast		
	Webinar presentation with talking points	TBD via written technical direction
	Post-webinar report outlining metrics, participants, polling question responses and chat transcripts for the Accessing Laboratory Support Webcast	TBD via written technical direction
4C.vi	WLA Response Plan "Reality Check" Webinars	
	List of potential contacts to provide cases studies and lessons learned relating to the usefulness of the WLA Response Plan.	September 30, 2016
	Outreach materials for WLA-RP reality check webinars	TBD via written technical direction
	Presentation and talking points for WLA-RP Reality check webinars	TBD via written technical direction
	Post-webinar report outlining metrics, participants, polling question responses and chat transcripts for the WLA-RP "Reality Check" Webinars	TBD via written technical direction
	Compilation of lessons learned and feedback for potential revisions or updates to the WLA Response Plan	TBD via written technical direction
4D: Finalization of Training Tools and Documents		
	If requested by EPA. These may include: <ul style="list-style-type: none"> • Accessing Laboratory Support Interactive Resource • Sampling Guidance for Unknown Contaminants 	TBD via written technical direction

Task 5: Support for OGWDW's Technical Support Center		
	A. Completion of EPA Method 1623 Audit checklists found in Supplement 2 of the 5th edition of the Manual for the Certification of Laboratories Analyzing Drinking Water.	To be assigned through written technical direction
	Written evaluation of lab corrective actions to findings and recommendations in conformance to the EPA's Supplement 2 of the 5th edition of the Manual for the Certification of Laboratories Analyzing Drinking Water.	20 working days after lab submission of corrective actions.
	Address any TSC comments.	5 working days after TSC request.
	Recommendations for crypto lab certification program improvement.	8/26/2016

VI. REPORTING REQUIREMENTS:

- (1) In the monthly progress report, the contractor shall report the cumulative amount expended to date (LOE and dollars) on the HSPD-9 project. In addition, the contractor shall report, per individual task area, LOE and dollars expended during the reporting period. The contractor shall provide one copy of the report to the WACOR and all technical points of contact.
- (2) The contractor shall notify the WACOR and Contracting Officer when 75% of the labor hours have been expended.
- (3) All travel must be authorized, in writing, by the Contract-Level COR.
- (4) The WACOR will provide exact travel dates, location, number of travelers, etc. via written technical direction prior to each trip. *For estimating purposes, the contractor shall include in the revised cost estimate 11 trips listed under tasks 3, 4, and 5. The contractor shall use the destination of Atlanta, GA (two days/one night) for trips identified as "TBD".*

The contractor's personnel shall always identify themselves as a contractor whenever their EPA work brings them in contact with the public.

VII. GREEN MEETINGS AND CONFERENCES

The contractor shall follow the provision of EPA prescription 1523.703-1, *Acquisition of environmentally preferable meeting and conference services (May 2007)*, for the use of off-site commercial facilities for an EPA event, whether the event is a meeting, conference, training session, or other purpose. Environmental preferability is defined at FAR 2.101, and shall be used when soliciting quotes or offers for meeting/conference services on behalf of the Agency.

VIII. CONFERENCES AND WORKSHOPS

The contractor shall immediately alert the WA COR to any anticipated event under the work assignment which may result in incurring an estimated \$20,000 or more cost, funded by EPA, specific to that event,

meeting, training, etc. Those costs would include travel of both prime and consultant personnel, planning and facilitation costs (including all outlaying preparation cost), AV and rental of venue costs, etc. The EPA WACOR will then prepare for the approval of the internal paperwork for the event and will advise the Contracting Officer (CO) when appropriate signatures have been obtained. The CO will notify the contractor. At that point, effort can proceed for the event. If the event is being sponsored by another EPA organization, the organization providing the planning is responsible for the approval.

Any event that meets the definition of a "conference," with total net expenditures greater than \$20,000, is required to submit EPA Electronic Form 5170 and Form 5170-A (with cost estimates/actuals). In case the workflow system is down and CORs require emergency approval, they can submit EPA Form 5170 (PDF) (2pp. 93K) (with cost estimates) to conference@epa.gov.

IX. SOFTWARE APPLICATION AND ACCESSIBILITY (SECTION 508 REHABILITATION ACT AND AMENDMENTS)

Software Application files, if delivered to the Government, shall conform to the requirements relating to accessibility as detailed to the 1998 amendments to the Rehabilitation Act, particularly, but not limited to, § 1194.21 Software applications and operating systems and § 1194.22 Web-based intranet and internet information and applications. See: <http://www.section508.gov/>

Preferred text format:	MS Word, 8.0 or higher (Office 2003 or higher)
Preferred presentation format:	Power Point, Office 2003 or higher
Preferred graphics format:	Each graphic is an individual GIF file
Preferred portable format:	Adobe Acrobat, version 6.0

The WACOR shall identify which of delivered products will require 508 compliance.

QUALITY ASSURANCE SURVEILLANCE PLAN for the Water Security Division's Technical, Analytical, and Regulatory Mission Support Performance Work Statement

Quality Assurance Surveillance Plan

The requirements contained in this work assignment are considered performance-based, focusing on the Agency's desired results and outcomes. The contractor shall be responsible for determining the most effective means by which these requirements will be fulfilled. In order to fulfill the requirements, the contractor shall design innovative processes and systems that can deliver the required services in a manner that will best meet the Agency's performance objectives. This performance-based requirement represents a challenge to the contractor to develop and apply innovative and efficient approaches for achieving results and meeting or exceeding the performance objectives, measures, and standards described in Attachment 4 of the contract. The Contractor's performance will be reflected in the positive or negative evaluation offered by the Agency in the Contractor Performance Evaluation (CPE) which is evaluated annually (per the "Contractor Performance Evaluation" clause in the contract). The WACOR shall submit a complete annual review of the areas outlined in the Quality Assurance Surveillance Plan (QASP), included in the contract, which will then be utilized by the Contract Level Contracting Officer Representative in preparing the overall evaluations submitted annually in response to the Contractor Performance Evaluation requirements in the contract.

EPAUnited States Environmental Protection Agency
Washington, DC 20460**Work Assignment**

Work Assignment Number

01-07

☐ Other☒ Amendment Number:

000001

Contract Number

EP-C-15-012

Contract Period 08/01/2015 To 07/31/2017

Base

Option Period Number 1

Title of Work Assignment/SF Site Name

Water Lab Alliance

Contractor

CSC GOVERNMENT SOLUTIONS LLC

Specify Section and paragraph of Contract SOW

2.1, 2.2, 2.3, 2.5, 2.7, 2.8, 2.9, 2.14, 2.15

Purpose:

☐

Work Assignment

☐

Work Assignment Close-Out

☒

Work Assignment Amendment

☐

Incremental Funding

☐

Work Plan Approval

Period of Performance

From 08/01/2016 To 07/31/2017

Comments:

The purpose of this amendment 1 to CSC (EP-C-15-012) WA 01-07 is to add a technical expert, Carrie Miller, to the work assignment.

☐

Superfund

Accounting and Appropriations Data

☒

Non-Superfund

SFO

(Max 2)

☐

Note: To report additional accounting and appropriations data use EPA Form 1900-69A.

Line	DCN (Max 6)	Budget/FY (Max 4)	Appropriation Code (Max 6)	Budget Org/Code (Max 7)	Program Element (Max 9)	Object Class (Max 4)	Amount (Dollars)	(Cents)	Site/Project (Max 8)	Cost Org/Code
1										
2										
3										
4										
5										

Authorized Work Assignment Ceiling

Contract Period:

Cost/Fee:

LOE:

08/01/2015 To 07/31/2017

This Action:

Total:

Work Plan / Cost Estimate Approvals

Contractor W/P Dated:

Cost/Fee

LOE:

Cumulative Approved:

Cost/Fee

LOE:

Work Assignment Manager Name George Gardenier

Branch/Mail Code:

Phone Number: 202-564-3333

FAX Number:

(Signature)

(Date)

Project Officer Name Nancy Parrotta

Branch/Mail Code:

Phone Number: 202-564-5260

FAX Number:

(Signature)

(Date)

Other Agency Official Name Erin Ridder

Branch/Mail Code:

Phone Number: 513-487-2155

FAX Number:

(Signature)

(Date)

Contracting Official Name Sandra Stargardt-Licis

Branch/Mail Code:

Phone Number: 513-487-2006

FAX Number:

(Signature)

(Date)

EPAUnited States Environmental Protection Agency
Washington, DC 20460**Work Assignment**

Work Assignment Number

01-07

☐ Other☒ Amendment Number:

000002

Contract Number
EP-C-15-012

Contract Period 08/01/2015 To 07/31/2017

Title of Work Assignment/SF Site Name

Water Lab Alliance

Contractor
CSRA LLC

Specify Section and paragraph of Contract SOW

2.1, 2.2, 2.3, 2.5, 2.7, 2.8, 2.9, 2.14, 2.15, 2.1

Purpose:

☐

Work Assignment

☐

Work Assignment Close-Out

☒

Work Assignment Amendment

☐

Incremental Funding

☐

Work Plan Approval

Period of Performance

From 08/01/2016 To 07/31/2017

Comments:

The purpose of this amendment 2 to CSRA (EP-c-15-012) WA 01-07 is to change the WACOR to Latisha Mapp and the alternate WACOR to George Gardenier. Also, to add additional LOE to Task 5 to support EPA activities related to advancing the equivalence between State and Federal Laboratory certification Programs.

☐

Superfund

Accounting and Appropriations Data

☒

Non-Superfund

SFO
(Max 2)☐

Note: To report additional accounting and appropriations data use EPA Form 1900-69A.

Line	DCN (Max 6)	Budget/FY (Max 4)	Appropriation Code (Max 6)	Budget Org/Code (Max 7)	Program Element (Max 9)	Object Class (Max 4)	Amount (Dollars)	(Cents)	Site/Project (Max 8)	Cost Org/Code
1										
2										
3										
4										
5										

Authorized Work Assignment Ceiling

Contract Period:

Cost/Fee:

LOE: 5,980

08/01/2015 To 07/31/2017

This Action:

0

Total:

5,980

Work Plan / Cost Estimate Approvals

Contractor WP Dated:

Cost/Fee

LOE:

Cumulative Approved:

Cost/Fee

LOE:

Work Assignment Manager Name Latisha Mapp

Branch/Mail Code:

Phone Number: 202-564-1390

FAX Number:

(Signature)

(Date)

Project Officer Name Nancy Parrotta

Branch/Mail Code:

Phone Number: 202-564-5260

FAX Number:

(Signature)

(Date)

Other Agency Official Name

Branch/Mail Code:

Phone Number:

FAX Number:

(Signature)

(Date)

Contracting Official Name Donna Reinhart

Branch/Mail Code:

Phone Number: 513-487-2114

FAX Number:

(Signature)

(Date)

EPAUnited States Environmental Protection Agency
Washington, DC 20460**Work Assignment**

Work Assignment Number

01-08

☐ Other ☐ Amendment Number:Contract Number
EP-C-15-012Contract Period 08/01/2015 To 07/31/2017
Base Option Period Number 1Title of Work Assignment/SF Site Name
Emergency Preparedness, ResponContractor
CSC GOVERNMENT SOLUTIONS LLCSpecify Section and paragraph of Contract SOW
2.1, 2.2, 2.12, 2.14, 2.15, 2.16, 2.17, 2.18Purpose: ☒ Work Assignment ☐ Work Assignment Close-Out
☐ Work Assignment Amendment ☐ Incremental Funding
☐ Work Plan Approval

Period of Performance

From 08/01/2016 To 07/31/2017

Comments:

☐ Superfund

Accounting and Appropriations Data

☒ Non-SuperfundSFO
(Max 2)

Note: To report additional accounting and appropriations data use EPA Form 1900-69A.

Line	DCN (Max 6)	Budget/FY (Max 4)	Appropriation Code (Max 6)	Budget Org/Code (Max 7)	Program Element (Max 9)	Object Class (Max 4)	Amount (Dollars)	(Cents)	Site/Project (Max 8)	Cost Org/Code
1										
2										
3										
4										
5										

Authorized Work Assignment Ceiling

Contract Period:
08/01/2015 To 07/31/2017

Cost/Fee:

LOE: 0

This Action:

1,000

Total:

1,000

Work Plan / Cost Estimate Approvals

Contractor WP Dated:

Cost/Fee

LOE:

Cumulative Approved:

Cost/Fee

LOE:

Work Assignment Manager Name Brian Pickard

Branch/Mail Code:

Phone Number: 202-564-0827

FAX Number:

(Signature)

(Date)

Project Officer Name Nancy Parrotta

Branch/Mail Code:

Phone Number: 202-564-5260

FAX Number:

(Signature)

(Date)

Other Agency Official Name

Branch/Mail Code:

Phone Number:

FAX Number:

(Signature)

(Date)

Contracting Official Name Donna Reinhart

Branch/Mail Code:

Phone Number: 513-487-2114

FAX Number:

(Signature)

(Date)

**WORK ASSIGNMENT (WA)
PERFORMANCE WORK STATEMENT (PWS)**

Contract No. EP-C-15-012

Work Assignment: WA-01-08

WACOR:

Name:	Brian Pickard
Branch:	Security Assistance Branch
Division:	Water Security Division
Office:	Office of Water
Phone:	202-564-0827
FAX:	202-566-0055
E-mail:	Pickard.Brian@epa.gov
Mail code:	4608T
Street Address:	1200 Pennsylvania Ave., NW
City, State, Zip:	Washington, DC 20460

Alt WACOR:

Name:	Kevin Tingley
Branch:	Security Assistance Branch
Division:	Water Security Division
Office:	Office of Water
Phone:	202-564-4619
FAX:	202-566-0055
E-mail:	Tingley.Kevin@epa.gov
Mail code:	4608T
Street Address:	1200 Pennsylvania Ave., NW
City, State, Zip:	Washington, DC 20460

Task Managers:

Name:	David Goldbloom-Helzner
Branch:	Security Assistance Branch
Division:	Water Security Division
Office:	Office of Water
Phone:	202-564-2106
FAX:	202-566-0055
E-mail:	Goldbloom-Helzner.David@epa.gov
Mail code:	4608T
Street Address:	1200 Pennsylvania Ave., NW
City, State, Zip:	Washington, DC 20460

Name:	Kevin Tingley
Branch:	Security Assistance Branch

Division: Water Security Division
Office: Office of Water
Phone: 202-564-4619
FAX: 202-566-0055
E-mail: Tingley.Kevin@epa.gov
Mail code: 4608T
Street Address: 1200 Pennsylvania Ave., NW
City, State, Zip: Washington, DC 20460

Period of Performance: August 1, 2016 to July 31, 2017

Title: Emergency Preparedness, Response and Recovery _____

PWS Sections: 2.1, .2, 2.3, 2.12, 2.14, 2.15, 2.16, 2.17, 2.18 _____

I. PURPOSE:

The purpose of this work assignment is to augment the Environmental Protection Agency's efforts to protect the nation's water infrastructure. The nation's water infrastructure is subject to threats from various entities, as well as natural disasters, and preparedness information, training, and insight will provide support toward improved response to threats and incidents. Under this work assignment, the contractor shall provide support to the Office of Water, Water Security Division (OW/WSD) (and other identified EPA offices or partners that come within the scope of this work statement) in its effort to: enhance and promote national emergency preparedness, disaster response, and mutual aid and assistance for public and private water and wastewater utilities, states and federal partners on a national level; and develop national response exercises and activities related to these and other infrastructure threats and incidents.

To achieve this purpose, the contractor shall research, develop, maintain, edit, and disseminate technical information, guidelines, drills, field exercises, web tools, and procedures to aid in emergency preparedness, response and recovery; and shall track and coordinate efforts, drills, exercises and threats related to water security. The contractor may also be tasked with related efforts, including facilitating and coordinating water utility response networks to support and promote national emergency preparedness. Other requirements related to infrastructure analysis, strategic planning, tracking and measuring progress, mission priorities, communications, and emergency options for energy, communications, or transportation sectors may become necessary, subject to developing events.

Examples of other partners and external offices or agencies which may be included in coordination, and the nature of their involvement, are:

- Drinking water and wastewater associations and stakeholders: provide feedback on the

- needs of utilities and review information provided for dissemination;
- State and local governments/associations: provide feedback on the activities for state and local agencies including primacy agencies and emergency management agencies;
- Department of Homeland Security: the organizers and lead agency for the development of national exercises;
- EPA National Homeland Security Research Center: close partners of the Water Security Division in support of water security research;
- National Emergency Management Agency: administers the Emergency Management Assistance Compact (EMAC); and
- Regional offices of the EPA.

This work assignment supports the mission of the Water Security Division (WSD) as described in the Water Security Strategy framework, which relates resources, activities, outputs, audience, short- and long- term outcomes to the WSD pillars of Prevention, Detection, Response, and Recovery. Additionally, this work assignment contributes to the commitments made in EPA's *Strategic Plan: 2011 to 2015* and EPA's *Homeland Security Strategy (2004)*. Under EPA's *Strategic Plan*, reference is made to Goal 2 (Clean and Safe Water), Objective 2.1 (Protecting Human Health), Sub-objective 2.1.1 (Water Safe to Drink), and to the Cross-Goal on homeland security. Under EPA's *Homeland Security Strategy*, reference is made to Objective 1 (Critical Infrastructure Protection).

In support of these requirements, this contract supports the nation's drinking and wastewater infrastructure, collectively known as the Water Sector, in being informed, coordinated, and prepared to prevent, detect, respond to, and recover from terrorist attack and other intentional acts, natural disasters, and other hazards (referred to as the "all hazards' approach), which may also occur, including the needs and challenges posed by natural disasters, catastrophic events, adaptation and impacts of climate change, floods, earthquakes, pandemic illness, and any other events which impact the safety and availability of our water supply.

In pursuit of these efforts, the contractor may be tasked with preparing a correlation summary comparing the results under this work assignment to the components of the Water Security Strategy framework.

II. BACKGROUND:

Title IV of the Public Health Security and Bioterrorism Response Act of 2002 (Bioterrorism Act) amends the Safe Drinking Water Act (SDWA) and authorizes EPA to undertake several activities to increase the security and readiness of the Nation's drinking water supplies against terrorist attacks. One key objective for EPA set out by the Act is to review methods and means by which terrorists could disrupt the supply of safe drinking water or take actions against water infrastructure.

EPA has been designated as the sector specific agency for the water sector by Presidential Policy Directive (PPD) -21. As part of EPA's efforts as the sector specific agency, support is

provided to the water sector for threat identification and national response efforts and exercises. The Agency is involved in a number of exercises each year, some of which are very large in scale.

The National Strategy for Homeland Security (White House, July 2002) has also designated EPA as the lead agency for the nation's water infrastructure sector. EPA's Homeland Security Strategy (2004) documents the Agency's efforts to provide support to drinking water and wastewater utilities. It includes placing "an emphasis on preparedness and prevention, assisting those responsible for these critical infrastructures in assessing and reducing vulnerabilities and maximizing their response capabilities. EPA will develop technologies to improve the nation's critical infrastructure and key responders' abilities to detect and monitor environmental threats." The tasks included in this work assignment support EPA's efforts to enhance the preparedness, response, and recovery of the water sector critical infrastructure in the event of an incident of national significance or other natural or man-made incident.

The work that will be conducted under this work assignment is a continuation of work conducted in previous years. To date, a number of accomplishments have been achieved, including support for emergency response exercises and development of a flood resilience and mitigation trainings. As requested, support materials from this work will be provided by the EPA WACOR to the Contractor.

III. QUALITY ASSURANCE:

The tasks in this work assignment do not require quality assurance (QA). Consistent with the Agency's QA requirements, the contractor does not need to supplement the Contract Quality Assurance Project Plan (QAPP) or to prepare a Project Specific Quality Assurance project Plan (PQAPP).

IV. DETAILED TASK DESCRIPTION:

In addition to Task 0, Work Plan, Progress Evaluations, and Monthly Progress Reports, there are two tasks described in this work assignment. In addition to the Work Assignment Contracting Officer Representative (WACOR) named on the title page, a Task Manager (TM) will be assigned to each task and will be authorized to provide technical direction to the contractor for that task. A summary listing of the tasks, along with the associated TM, is shown in the following table.

Task #	Task Title	Task Manager
0	Work Plan, Progress Reports, and Project Tracking	Brian Pickard
1	State Emergency Response Exercises for the Water Sector	Kevin Tingley
2	Recovery and Resilience	David Goldbloom-Helzner

All direction under this WA will be provided as written technical direction from the WACOR,

Alternate WACOR, or Task Manager (TM), as appropriate. If provided first as verbal technical direction to the contractor, it will be confirmed in writing within 5 calendar days, with a copy to the CL COR and the Contracting Officer (CO), and is subject to the limitations of the technical direction contract clause. Each initial deliverable shall be provided to the EPA WACOR in draft form for review and comment. The contractor shall incorporate WACOR/TM review comments into revisions of the drafts. All drafts and final reports shall be approved by the WACOR.

The contractor shall perform the following tasks:

Task 0: Work Plan (WP), Progress Evaluations, and Monthly Progress Reports

The contractor shall develop a WP that describes how each task will be carried out. The work plan shall include a schedule, staffing plan, level of effort (LOE), and cost estimate for each task, the contractor's key assumptions on which staffing plan and budget are based, and qualifications of proposed staff. In addition, the work plan shall include the requirement that all electronic and information technology (EIT) and all EIT deliverables be Section 508 compliant in accordance with the policies referenced at <http://www.epa.gov/accessibility/>. If a subcontractor(s) is proposed and subcontractors are outside the local metropolitan area, the contractor shall include information on plans to manage work and contract costs. In addition, the work plan shall specify that a Supplemental Project Specific Quality Assurance Project Plan (SQAPP) appending the Contract Level QAPP or a PQAPP is not required.

In each monthly progress report, the contractor shall, at the introduction to the discussion of this WA, discuss actual progress toward achieving the purpose of this work assignment, including problems encountered, issues that may need to be resolved, and anticipated timing for completing the goals of the WA. The contractor shall provide an overview of contract projects, striving to implement efficiencies in performance when complimentary requirements are issued. The contractor shall assure that duplication of effort relative to other ongoing WA under this contract is not occurring.

Deliverables: Work plan and monthly progress and financial reports.

Task 1: State Emergency Response Exercises for the Water Sector

The contractor shall continue to support the development of a tabletop exercise in Ohio that will test the ability of water sector emergency response stakeholders to provide coordinated response to a major disaster affecting the water sector. (Planning of this exercise began during the base contract period). Similar exercises in this series were held in Indiana, Mississippi and MHA Nation in 2014; and Michigan and Oklahoma in 2015. The contractor shall also support continued after-action activities associated with the Georgia state exercise that took place during the previous option period.

Stakeholders involved in the exercise include EPA HQ (Office of Water, Office of Emergency Management), the Department of Health and Human Services (HHS), the Water Laboratory

Alliance, one or more WARN networks, EPA Regional Water Teams, EPA On-Scene Coordinators, US Army Corps of Engineers (HQ and Districts), FEMA (HQ and Regions), State and Tribal primacy, permitting authority, and emergency management agencies, water and wastewater associations, Water ISAC and water and wastewater utilities. Issues to explore are to be determined, but may include any of the following: disaster declaration; preliminary damage assessment; activation of local or state mutual aid and assistance such as WARN, EMAC and Regional capabilities; national level reporting; resource management, request for assistance, mission assignment, and subtasking procedures; sampling and laboratory analysis; Incident Command System structures; data management; and cross-sector interdependencies.

The contractor shall support the continued development of the Ohio exercise by performing the following activities, as directed:

1. Developing background materials for review by the exercise design team
2. Providing guidance to the exercise design team on exercise options
3. Facilitating and taking notes at exercise design team meetings (including one 2-3 hour meetings and 1-2 additional 1 hour meetings)
4. Developing exercise materials including information sheets, briefings, timelines, situation manuals, exercise plans, and job aids
5. Facilitating the exercise and conducting a Hot Wash
6. Developing an After Action Report for exercise participants

For estimating purposes, it is anticipated that the State Exercise support will require up to two contractor staff to make one trip of two days.

The contractor shall support follow-up to the Georgia exercise (conducted in August, 2015) by developing an After Action Report for exercise participants.

Exercise Follow-up

The contractor shall also provide support, as needed, to the planning team for both the Georgia and Ohio state exercises. Support could include the following:

1. Convening Exercise Planning Team (EPT) for a "where are we now" meeting;
2. Working with EPT to determine which actions from their Improvement Planning Matrix remain to be addressed and develop plans for addressing them;
3. Leveraging the latest fact sheets and consolidating lists of resources that can help the states accomplish their action items. Resources cover topics such as power requirements, temporary water systems, and a checklist for utilities to use when coordinating with their local Emergency Management Agencies (EMAs).
4. Leveraging materials from Fed FUNDS, helping state agencies develop or refine existing water sector-specific Damage Assessment forms.
5. Helping state agencies to develop or refine existing pre-identified resource requests/FEMA Action Request Forms.

Task 2: Recovery and Resilience

Subtask 2a. Outreach for Flood Resilience Guide

The Flood Resilience Guide has been well received and requested by a variety of stakeholders. The contractor shall assist EPA in conducting a flood resilience workshop in New Jersey (NJ), for which planning efforts were already started under a previous workplan. The contractor will have slight modifications of the materials for NJ and then shall conduct back to back all day trainings on September 13 and 14, 2016 in separate locations in NJ. The contractor shall connect and assemble evaluation information on the trainings. One contractor shall co-present the training with trainers from the New Jersey Water Association.

For estimating purposes, it is anticipated that the NJ training will require one contractor staff to make one trip of up to four days, which includes both trainings (September 13 and 14, 2016). Note that exact training dates may change based on discussions with the TM and NJ points of contact.

Subtask 2b: Regional Flood Resilience for Water/Wastewater Utilities

The contractor shall work with EPA to enhance regional flood resilience for a group of water and wastewater utilities by giving them detailed mitigation recommendations and having them become a part of the local and state hazard mitigation process. To assist, this project will use EPA's draft tool, Hazard Mitigation for Natural Disasters: A Starter Guide for Water and Wastewater Utilities. Also, utilities will use EPA's new tool, Flood Resilience: A Basic Guide for Water and Wastewater Utilities (Flood Resilience Guide), to scope out specific flood mitigation measures for their utility assets, and then incorporate these measures into their local/state hazard mitigation plan. These documents will be provided to the contractor by EPA.

Support Plan for Project and Project Team

A major goal of the project is to help a group of water/wastewater utilities mitigate damages and enhance regional flood resilience through local/state mitigation planning efforts. Initially, we anticipate that the project will be conducted for several communities in Iowa that are concerned about flooding in infrastructures. Possible communities include: New Hartford and Hopkinton, Iowa. In a previous workplan, the contractor helped EPA manage a Project Team (PT) on Regional Resilience. The PT included EPA HQ and Region 7 staff, FEMA staff, Iowa primacy agency staff, Iowa mitigation staff (state hazard mitigation officer, local hazard mitigation officers, state floodplain managers, etc), and Iowa Rural Water Association. The contractor will facilitate up to two (2) additional planning conference calls with the PT.

The contractor shall provide staff that are skilled and experienced in utility flood risk assessment and mitigation efforts and familiar with EPA's Flood Resilience Guide.

Conduct Flood Resilience Project with Selected Community/Group of Utilities

After the community/group of utilities is selected, the contractor shall help EPA conduct the Flood Resilience Project Plan. The Project Plan involves an on-site visit at each utility and a follow up workshop.

1. On-site visits: For the utilities selected in the project, the contractor shall help EPA work out logistics of the on-site visit and conduct a flood risk assessment and propose/evaluate mitigation measures to build flood resilience for the utility. It is anticipated that 2-3 utilities will participate. The contractor shall base the on-site visits on materials from EPA's Flood Resilience Guide as well as on previous approaches to on-site flood resilience investigations conducted for the Berwick, Maine utility, Florida utilities, and Colorado utilities. To prepare for the on-site visits, the contractor shall contact the individual utilities to gather information for the on-site visits and arrange the logistics of the visits. During the on-site visits, utilities will work with the contractor and state/local officials to conduct walk-throughs at water/wastewater systems, take elevation measurements of key assets/operations (using the inspection form in the Flood Resilience Guide), and brainstorm ideas for mitigation projects to protect the assets/operations. The contractor shall complete tables in Flood Resilience Guide. Efforts will be made to conduct back to back on-site visits to the utilities to minimize travel costs, if possible. The contractor shall provide staff with expertise on water and wastewater flood resilience and mitigation to conduct the on-site visits.

2. Concluding Workshop: All utilities participating in the project will participate in a concluding workshop in Iowa. Local mitigation planners will also attend. The workshop will focus on what was covered during the on-site visits (presentations given by utilities), how mitigation projects can be included into local mitigation plans (involve local mitigation planners), and how to implement the mitigation recommendations (including how to produce effective applications for local, state, and federal funding). The workshop will also discuss follow-up and improvement planning to help utilities implement these mitigation measures. The contractor shall support logistics of workshop (e.g., arrange meeting space).

3. Improvement Planning and Follow-up Calls: The contractor shall assist EPA in conducting two improvement planning/follow-up calls with each of the utilities participating in the effort. The contractor shall assist with follow-up efforts identified during the calls, which may include providing additional cost estimates, determining the benefits of mitigation measures and helping to format information for possible federal funding.

For estimating purposes, it is anticipated this subtask will require two (2) three-day trips (2 nights) to Iowa for two contractors each.

Report on On-Site Visits

The contractor shall develop a report of the on-site visits to include what was conducted, data/analyses from the visits, and analysis for mitigation recommendations (including

suggestions on how best to fund the recommendation). The contractor shall work with all stakeholders in preparing the report, especially working with the state on technical and funding issues.

EPA will review all materials prior to use. The contractors shall clearly identify themselves as contractor personnel at all activities associated with this task.

V. SCHEDULE/DELIVERABLES TABLE

Task	Deliverable	Quantity	Due Date
0	Work plan	1	Per contract requirements
0	Monthly progress and financial reports.	12	Per contract requirements
1	Meeting notes for State Exercise Design Team calls	6	To be established by written technical direction
1	Situation Manuals for State Exercises	2	To be established by written technical direction
1	Exercise Fact Sheet	2	To be established by written technical direction
1	Exercise Invitation	2	To be established by written technical direction
1	Exercise after Action report	2	To be established by written technical direction
1	Past Exercise Support – meeting notes	2	To be established by written technical direction
1	Past Exercise Support – action recommendations	1	To be established by written technical direction
2a	Support NJ flood resilience workshop	1	To be established by written technical direction
2b	On-Site Flood Utility Visits	2-3, back to back	To be established by written technical direction
2b	Concluding Workshop	1	To be established by written technical direction
2b	Improvement Planning/Follow-up	2-3	To be established by written technical

	Calls		direction
2b	Report on On-Site Visits	1	To be established by written technical direction

VI. REPORTING REQUIREMENTS

Monthly Progress Reports (including a progress evaluation discussion)
Financial Reports

VII. GREEN MEETINGS AND CONFERENCES

The contractor shall follow the provision of EPA prescription 1523.703-1, *Acquisition of environmentally preferable meeting and conference services (May 2007)*, for the use of off-site commercial facilities for an EPA event, whether the event is a meeting, conference, training session, or other purpose. Environmental preferability is defined at FAR 2.101, and shall be used when soliciting quotes or offers for meeting/conference services on behalf of the Agency.

VIII. CONFERENCES AND WORKSHOPS

The tasks under this work assignment may require the acquisition of "off-site" facilities for conferences and meetings as defined in the IPN 12-05. AND the events associated with this work assignment are covered by EPA Order 1900.3 and do require EPA Form 5170.

The contractor shall immediately alert the WACOR to any anticipated event under the work assignment which may result in incurring an estimated \$20,000 or more cost, funded by EPA, specific to that event, meeting, training, etc. Those costs would include travel of both prime and consultant personnel, planning and facilitation costs, AV and rental of venue costs, etc. The EPA WACOR will then prepare for approval the internal paperwork for the event and will advise the contractor when appropriate signatures have been obtained. At that point, effort can proceed for the event. If the event is being sponsored by another EPA organization, the organization providing the planning is responsible for the approval.

Any event which meets the definition of a "conference," with total net expenditures greater than \$20,000, is required to submit EPA Electronic Form 5170 and Form 5170-A (with cost estimates/actuals). In the case the workflow system is down and CORs require emergency approval, they can submit EPA Form 5170 (PDF) (2pp, 93K) (with cost estimates) to conference@epa.gov.

IX. SOFTWARE APPLICATION AND ACCESSIBILITY (SECTION 508 REHABILITATION ACT AND AMENDMENTS)

Software Application files, if delivered to the Government, shall conform to the requirements relating to accessibility as detailed to the 1998 amendments to the Rehabilitation Act, particularly, but not limited to, § 1194.21 Software applications and operating systems and § 1194.22 Web-based intranet and internet information and applications. See: <http://www.section508.gov/>

Preferred text format:	MS Word, 8.0 or higher (Office 2007 or higher)
Preferred presentation format:	Power Point, Office 2007 or higher
Preferred graphics format:	Each graphic is an individual GIF file
Preferred portable format:	Adobe Acrobat, version 6.0

The WACOR shall identify which of delivered products will require 508 compliance.

***QUALITY ASSURANCE SURVEILLANCE PLAN
for WSD's Mission Support***

Quality Assurance Surveillance Plan

The requirements contained in this WA are considered performance-based, focusing on the Agency's desired results and outcomes. The contractor shall be responsible for determining the most effective means by which these requirements will be fulfilled. In order to fulfill the requirements, the contractor shall design innovative processes and systems that can deliver the required services in a manner that will best meet the Agency's performance objectives. This performance-based requirement represents a challenge to the contractor to develop and apply innovative and efficient approaches for achieving results and meeting or exceeding the performance objectives, measures, and standards described in the contract. The Contractor's performance will be reflected in the positive or negative evaluation offered by the Agency in the Contractor Performance Evaluation (CPE) which is evaluated annually (per the "Contractor Performance Evaluation" clause in the contract). The WACOR shall submit a complete annual review of the areas outlined in the Quality Assurance Surveillance Plan (QASP), included in the contract, which will then be utilized by the CLCOR in preparing the overall evaluations submitted annually in response to the Contractor Performance Evaluation requirements in the contract.



United States Environmental Protection Agency
Washington, DC 20460

Work Assignment

Work Assignment Number

01-08

☐ Other

☒ Amendment Number:

000001

Contract Number
EP-C-15-012

Contract Period 08/01/2015 To 07/31/2017

Title of Work Assignment/SF Site Name

Emergency Preparedness, Respon

Contractor
CSRA LLC

Specify Section and paragraph of Contract SOW

2.1, 2.2, 2.12, 2.14, 2.15, 2.16, 2.17, 2.18

Purpose:

☐

Work Assignment

☐

Work Assignment Close-Out

☒

Work Assignment Amendment

☐

Incremental Funding

☐

Work Plan Approval

Period of Performance

From 08/01/2016 To 07/31/2017

Comments:

The purpose of this amendment 1 to CSC (EP-c-15-012) WA -1-08 is to add a Task 3 Region 9 Drought Water Loss Workshops.

☐

Superfund

Accounting and Appropriations Data

☒

Non-Superfund

SFO
(Max 2)

☐

Note: To report additional accounting and appropriations data use EPA Form 1900-69A.

Line	DCN (Max 6)	Budget/FY (Max 4)	Appropriation Code (Max 6)	Budget Org/Code (Max 7)	Program Element (Max 9)	Object Class (Max 4)	Amount (Dollars)	(Cents)	Site/Project (Max 8)	Cost Org/Code
1										
2										
3										
4										
5										

Authorized Work Assignment Ceiling

Contract Period:

Cost/Fee:

LOE:

08/01/2015 To 07/31/2017

This Action:

Total:

Work Plan / Cost Estimate Approvals

Contractor W/P Dated:

Cost/Fee

LOE:

Cumulative Approved:

Cost/Fee

LOE:

Work Assignment Manager Name Brian Pickard

Branch/Mail Code:

Phone Number: 202-564-0827

FAX Number:

(Signature)

(Date)

Project Officer Name Nancy Parrotta

Branch/Mail Code:

Phone Number: 202-564-5260

FAX Number:

(Signature)

(Date)

Other Agency Official Name Erin Ridder

Branch/Mail Code:

Phone Number: 513-487-2155

FAX Number:

(Signature)

(Date)

Contracting Official Name Sandra Stargardt-Licis

Branch/Mail Code:

Phone Number: 513-487-2006

FAX Number:

(Signature)

(Date)

EPAUnited States Environmental Protection Agency
Washington, DC 20460**Work Assignment**

Work Assignment Number

01-08

☐ Other☒ Amendment Number:

000002

Contract Number

EP-C-15-012

Contract Period 08/01/2015 To 07/31/2017

Base

Option Period Number 1

Title of Work Assignment/SF Site Name

Emergency Preparedness Respons

Contractor

CSRA LLC

Specify Section and paragraph of Contract SOW

2.1, 2.2, 2.12, 2.13, 2.15, 2.16, 2.17, 2.18

Purpose:

☐

Work Assignment

☐

Work Assignment Close-Out

☒

Work Assignment Amendment

☐

Incremental Funding

☐

Work Plan Approval

Period of Performance

From 10/28/2016 To 07/31/2017

Comments:

The purpose of this amendment 2 to CSRA (EP-C-15-012) WA 01-08 is to add new task 4 - Boot Camp Training Outreach and Updates, Task 5 - Drought Response and Recovery, Task 6 - ER factsheets and new subtasks for Tasks 1 and 2.

☐

Superfund

Accounting and Appropriations Data

☒

Non-Superfund

SFO

(Max 2)

☐

Note: To report additional accounting and appropriations data use EPA Form 1900-69A.

Line	DCN (Max 6)	Budget/FY (Max 4)	Appropriation Code (Max 6)	Budget Org/Code (Max 7)	Program Element (Max 9)	Object Class (Max 4)	Amount (Dollars)	(Cents)	Site/Project (Max 8)	Cost Org/Code
1										
2										
3										
4										
5										

Authorized Work Assignment Ceiling

Contract Period:

Cost/Fee:

LOE:

08/01/2015 To 07/31/2017

This Action:

Total:

Work Plan / Cost Estimate Approvals

Contractor WP Dated:

Cost/Fee

LOE:

Cumulative Approved:

Cost/Fee

LOE:

Work Assignment Manager Name Brian Pickard

Branch/Mail Code:

Phone Number: 202-564-0827

FAX Number:

(Signature)

(Date)

Project Officer Name Nancy Parrotta

Branch/Mail Code:

Phone Number: 202-564-5260

FAX Number:

(Signature)

(Date)

Other Agency Official Name Erin Ridder

Branch/Mail Code:

Phone Number: 513-487-2155

FAX Number:

(Signature)

(Date)

Contracting Official Name Donna Reinhart

Branch/Mail Code:

Phone Number: 513-487-2114

FAX Number:

(Signature)

(Date)

EPA United States Environmental Protection Agency Washington, DC 20460 Work Assignment		Work Assignment Number 01-10 <input type="checkbox"/> Other <input type="checkbox"/> Amendment Number:								
Contract Number EP-C-15-012		Contract Period 08/01/2015 To 07/31/2017 Base Option Period Number 1								
Contractor CSC GOVERNMENT SOLUTIONS LLC		Title of Work Assignment/SF Site Name Environ Resp Lab Network								
Specify Section and paragraph of Contract SOW 2.1, 2.2, 2.3, 2.5, 2.6, 2.7, 2.8, 2.9, 2.11, 2.13										
Purpose: <input checked="" type="checkbox"/> Work Assignment <input type="checkbox"/> Work Assignment Close-Out <input type="checkbox"/> Work Assignment Amendment <input type="checkbox"/> Incremental Funding <input type="checkbox"/> Work Plan Approval		Period of Performance From 08/01/2016 To 07/31/2017								
Comments:										
<input type="checkbox"/> Superfund Accounting and Appropriations Data <input checked="" type="checkbox"/> Non-Superfund										
Note: To report additional accounting and appropriations data use EPA Form 1900-69A.										
SFO <input type="checkbox"/> (Max 2)										
Line	DCN (Max 6)	Budget/FY (Max 4)	Appropriation Code (Max 6)	Budget Org/Code (Max 7)	Program Element (Max 9)	Object Class (Max 4)	Amount (Dollars)	(Cents)	Site/Project (Max 8)	Cost Org/Code
1										
2										
3										
4										
5										
Authorized Work Assignment Ceiling										
Contract Period:		Cost/Fee:				LOE: 0				
08/01/2015 To 07/31/2017										
This Action:						9,600				
						9,600				
Total:										
Work Plan / Cost Estimate Approvals										
Contractor WP Dated:				Cost/Fee		LOE:				
Cumulative Approved:				Cost/Fee		LOE:				
Work Assignment Manager Name Terry Smith						Branch/Mail Code:				
_____ (Signature) (Date)						Phone Number: 202-564-2908				
						FAX Number:				
Project Officer Name Nancy Parrotta						Branch/Mail Code:				
_____ (Signature) (Date)						Phone Number: 202-564-5260				
						FAX Number:				
Other Agency Official Name						Branch/Mail Code:				
_____ (Signature) (Date)						Phone Number:				
						FAX Number:				
Contracting Official Name Donna Reinhart						Branch/Mail Code:				
_____ (Signature) (Date)						Phone Number: 513-487-2114				
						FAX Number:				

**WORK ASSIGNMENT (WA)
PERFORMANCE WORK STATEMENT (PWS)**

Contract No. EP-C-15-012

Work Assignment: WA-01-10

WACOR: **Name:** Terry Smith
 Branch: NA
 Division: Immediate Office
 Office: Office of Emergency Management (OEM)
 Phone: 202-564-2908
 FAX: NA_____-_____-_____
 E-mail: smith.terry_@epa.gov
 Mail code: 5104A
 Street Address: 1200 Pennsylvania Ave. N.W
 City, State, Zip: Washington D.C. 20460

Alt WACOR: **Name:** Lawrence Kaelin _____
 Branch: Field Operations Branch _____
 Division: Consequence Management Advisory Division____
 Office: Office of Emergency Management____
 Phone: 732- 321- 6625_____
 FAX: NA_____-_____-_____
 E-mail: kaelin.Lawrence@epa.gov
 Mail code: _____
 Street Address: 2890 Woodbridge Ave. Building 209B L202__
 City, State, Zip: Edison, NJ 08837 _____

LOE: 9600 hours

Period of Performance: August 1, 2016 to July 31, 2017

Title: Environmental Response Laboratory Network (ERLN)

PWS Sections: 2.1, 2.2, 2.3, 2.5, 2.6, 2.7, 2.8, 2.9, 2.11, 2.13, 2.15, 3.1.4

I. PURPOSE:

The purpose of this work assignment (WA) is to provide support to EPA's Office of Emergency Management (OEM) in managing the Environmental Response Laboratory Network (ERLN) of environmental testing laboratories in the United States. EPA established the broad ERLN in 2009, and contract support under contract EP-C-12-012, Work Assignment 14 has supported it. The intent of this current WA is to manage laboratory testing needs to support responses resulting from an environmental incident, ranging from threats to human health and the

environment from a release or potential release of hazardous substances/materials and oil to a nationally significant incident, such as a naturally occurring event (hurricane or tornado) or a major terrorist attack releasing extremely hazardous chemicals, biological agents, or radiological/nuclear agents. The contractor will play a role in supporting further development and update of this network and associated tools, as well as providing continuing management support for the long term sustainability of the network.

This work assignment also supports the maintenance and enhancement of the Compendium of Environmental Testing Laboratories (Laboratory Compendium), which is a web-based tool that enables users of laboratory services to provide and update individual laboratory profiles and to identify laboratories with appropriate analytical capabilities to respond to environmental incidents. Users include EPA, states, other federal agencies, and water utilities. EPA maintains the Laboratory Compendium within the EPA IT infrastructure and may be accessed at <https://cfext.epa.gov/cetl/>. It also supports the maintenance and enhancement of the Web-based Electronic Data Review (WebEDR) tool, which performs automated review of analytical data delivered via compatible electronic data deliverables (EDDs). Laboratories may perform self-inspections of a project's analytical data, and reviewers may review data against specific project measurement quality objectives. Users include ERLN members, non-ERLN members on a case-by-case basis, EPA, states, water utilities and commercial/private laboratories.

OEM has developed various project and work plans to define the scope of laboratory response-related activities and issues. This work assignment will build upon the prior work to fully assess and develop laboratory capacity and capabilities for water, air, soil, and surfaces to stay compatible and in parallel with other Agency projects. This work assignment will include efforts toward the enhancement and maintenance of the web-based Laboratory Compendium tool, a repository for ERLN-related data.

The work to be performed under this work assignment will provide support in the following areas, and will continue the work begun under previous contracts and work assignments on this contract:

Task 0 - Work Plan, Administration, and Management

Task 1 - Data Collection (non-Measurements) & Verification of Existing Laboratory Support Capabilities of ERLN and Prospective ERLN Compendium Laboratories

Task 2- Maintain and Enhance Web-based Laboratory Compendium's Functionality and Capability to Add New Laboratories

Task 3 - Prepare Technical Position Documents on Laboratory Issues

Task 4 - Enhance Electronic Data Deliverables and Web-Based Electronic Data Review Tool and Function

Task 5 – Organize and Support Stakeholder Meetings

Task 6 - Support to ERLN During an EPA Emergency Response Activity or Exercise

Task 7 – Develop EPA Enterprise Interface in Laboratory Compendium

II. BACKGROUND:

EPA's Office of Emergency Management (OEM) serves as the National Program Manager for emergency responses and removal actions conducted under the Comprehensive Environmental Response, Compensation and Liability Act (CERCLA), response actions conducted in the inland zone under the Oil Pollution Act (OPA), response actions under Emergency Support Function (ESF) 10 of the National Response Framework and other authorities, as appropriate. As part of the process for OEM to meet its mission-related needs, EPA created and now operates and maintains the ERLN.

The ERLN is a network of environmental laboratories (approximately 145 labs) containing a diverse nature of testing capabilities and capacity. The ERLN is available to support a variety of response actions, including CERCLA removals, OPA responses, and nationally significant incidents, such as Hurricane Katrina, the Japan earthquake/tsunami-Fukushima foreign nuclear incident, a terrorist event involving weapons of mass introduction, etc., and it will also support training and exercises. The ERLN is available to support the needs of environmental incidents regardless of the matrix. The Office of Radiation and Indoor Air (ORIA) leads the radiological component of the ERLN and will meet the Office of Air and Radiation's needs under its various authorities. ORIA has coordinated with OEM staff to develop radioanalytical capability and capacity to meet EPA's needs. The ERLN's water component, the Water Laboratory Alliance (WLA), supported by WA 00-09 on this contract, will meet the Office of Water's (OW) needs under its various authorities, such as the Clean Water Act, Safe Drinking Water Act, National Pollutant Discharge Elimination System (NPDES) activities, and other wastewater discharge activities. The Office of Groundwater and Drinking Water's Water Security Division has teamed with OEM's staff to ensure sufficient water testing laboratory (including certified drinking water labs and water utility labs) capability and capacity are incorporated into the ERLN via the WLA. EPA's Office of Research Development provides analytical method development support for OEM's, ORIA's and OW's authorities. The mission of the ERLN is to provide testing services of environmental matrices (water, soil, air, and surfaces). However, an impetus for testing of non-water matrices is to ensure contaminants are not allowed to migrate into surface water and drinking water sources.

III. QA REQUIREMENTS:

The tasks in this work assignment do not require environmental measurements. Consistent with the Agency's quality assurance (QA) requirements, the contractor does not need to supplement the Contract Quality Assurance Project Plan (QAPP) or to prepare a Project-Specific Quality Assurance Project Plan (PQAPP).

IV. DETAILED TASK DESCRIPTION:

All direction under this WA will be provided as written technical direction from the WACOR or Alternate WACOR, as appropriate. If provided first as verbal technical direction to the contractor, it will be confirmed in writing within 5 calendar days, with a copy to the CL COR and the Contracting Officer (CO), and is subject to the limitations of the technical direction

contract clause. Each initial deliverable shall be provided to the EPA WACOR in draft form for review and comment. The contractor shall incorporate WACOR review comments into revisions of the drafts. All drafts and final reports shall be approved by the WACOR.

The contractor shall perform the following tasks:

Task 0: Work Plan (WP), Progress Evaluations, and Monthly Progress Reports

The contractor shall develop a work plan that describes how each task will be carried out. The work plan shall include a schedule, staffing plan, level of effort (LOE), and cost estimate for each task, the contractor's key assumptions on which staffing plan and budget are based, and qualifications of proposed staff. If a subcontractor(s) is proposed and subcontractors are outside the local metropolitan area, the contractor shall include information on plans to manage work and contract costs. In addition, the work plan shall specify that a Supplemental Project Specific Quality Assurance Project Plan (SQAPP) appending the Contract QAPP or a PQAPP is not required. This task also includes monthly progress and financial reports. Monthly financial reports must include a table with the invoice LOE.

Deliverables: Work plan and monthly progress and financial reports.

Task 1: Data Collection (non-Measurements) & Verification of Existing Laboratory Support Capabilities of ERLN and Prospective ERLN Compendium Laboratories

The Laboratory Compendium is a living data base requiring updates whenever new laboratories apply for membership or there are potential user enhancement modifications for future use. (For cost estimate purposes only, assume there will be a need for three (3) updates per year.)

In this task, the contractor shall:

Collect and update laboratory specific information from federal, state, environmental, agricultural, university, public health laboratory, and commercial sources to expand the web-based EPA Laboratory Compendium tool, with the goal of being able to characterize the capacity and capability of EPA and non-EPA laboratories to analyze for priority contaminants in environmental samples (i.e., water, air, soil sediments, surfaces, etc.).

Update and analyze information contained within the existing Laboratory Compendium to ensure that data are current, accurate and consistent with expected parameters. Data in the current database will also be evaluated to identify common data associated with specific agents to maximize data consistency.

Provide user support for Laboratory Compendium data entry interface including orienting new users (for cost estimates, assume 15 new users per year), supporting system administrators, and contacting current laboratories to update existing information. Users are federal, state, and water utilities who are registered and approved for data access and who have an appropriate entry password. EPA approves users of the Laboratory Compendium through established Standard Operating Procedures. A list of approved users is included within the database. This support also includes continuing to provide data entry services for hard copy information summaries.

Provide additional data collection support as required to support OEM. For example, laboratory tabletop exercises (TTX) and Full Scale Exercises (FSE) demonstrating a simulated event, or Agency directed information searches may be required, in which case, technical direction will be issued. If those requests change the cost of the work assignment, OEM will prepare an amendment.

Collect new ERLN membership application information from EPA's Office of Acquisition Management (OAM). Compare the application to the ERLN membership criteria submitted by OEM, and provide summary report and applicant score to OEM.

Deliverable:

Updated Laboratory Compendium tool efforts shall be initiated upon receipt of TD requesting update. A summary report, listing any changes made to the web-based Laboratory Compendium tool shall be delivered to the WACOR. Scoring and reporting of new ERLN membership applications shall be submitted to OEM within 30 days of receipt of application from OAM.

Due Dates:

Summary of Laboratory Compendium updates shall be delivered 30 days from receipt of Technical Direction requesting Laboratory Compendium updates.

Task 2 – Maintain and Enhance Web-Based Laboratory Compendium's Functionality and Capability to Add New Laboratories

The contractor shall perform the following tasks:

Assist OEM in identifying new Laboratory Compendium users (for cost analysis assume that potentially up to ten (10) new users' groups) as well as expanding Laboratory Compendium capabilities in order to accommodate the evolving needs of various user communities. This assistance includes identifying data needs of stakeholders and possible areas to maximize and adapt Laboratory Compendium capabilities.

Enhance Laboratory Compendium functionality and accessibility, based on written technical direction received from the EPA WACOR. Provide enhanced search capabilities for locations, matrices and specific agent methods and capacities, a comprehensive glossary of terms, and enhanced user group and stakeholder-specific capabilities (i.e., data translations, additional instructions, etc.) to the Laboratory Compendium.

Based on technical direction received from the WACOR, the contractor shall incorporate specified enhancements into the Laboratory Compendium to accommodate user needs. These enhancements may include, but are not limited to, providing links to other EPA systems including the Water Contaminant Information Tool (WCIT) and EPA's Water Security Division's Analytical Toolbox.

Deliverable:

All requests through Task 2 shall be made through a Technical Direction. Deliverables shall be in the form of draft charts and summary and detailed data reports. Required due dates of each deliverable will be noted in the TD.

Task 3 - Prepare Technical Position Documents on Laboratory Issues

The Contractor shall perform the following tasks:

Draft Position Papers (for cost estimate purposes, assume eight (8) position papers) **as requested by written Technical Direction**, that discuss short-, medium-, and long-term recommendations to address identified gaps in laboratory capacity, capabilities, and operations. These documents may be in the form of white papers, summary reports, Quality Assurance Project Plans (QAPPs), outreach plans for facilitating inter-laboratory coordination and information exchange, technical approach plans for coordination of laboratory response activities, etc.

Provide assistance and support to OEM in developing ad hoc informational reports (for cost estimates, assume seven (7) reports) used to develop materials for EPA management regarding data contained in the Laboratory Compendium, recommended activities and improvements to EPA's environmental laboratory support as well as other laboratory-related issues.

Deliverable:

All requests through Task 3 shall be made through written Technical Direction. Deliverables shall be in the form of reports, either detailed, or summary as required through the TD. Required due dates of each deliverable will be noted in the TD.

Task 4 - Enhance Electronic Data Deliverables (EDD) and Web-based Electronic Data Review (WebEDR) tool

In this task, the Contractor shall perform the following tasks:

Update the current level 1 and level 1T EDD package to incorporate new data elements to meet program needs.

Update WebEDR tool to accommodate any changes made to current readable EDDs.

Update EDD package Type II to be consistent with ERLN Type II EDD requirements specified in the ERLN membership and data submission requirements guidance available on the ERLN website: <http://webedr.fedcsc.com/help/pdf/ERLN-ReqsforDataSubmissions.pdf>

Update WebEDR tool to accommodate any changes made to current readable EDDs, including SCRIBE.

Participate in meetings (for cost estimate purposes, assume long distance travel of six (6) trips with each trip needing support of three (3) contractors) set up by the EPA WACOR to establish further data delivery needs of the ERLN. This support may consist of meetings designed to expand the

elements of the current 1, 1T, and Type 2 level EDD or to develop a single EDD incorporating the 1, 1T, and 2 formats with the formats used by other offices within EPA, e.g., EPA's Office of Superfund Remediation and Technical Innovation (OSRTI) Staged Electronic Data Deliverable (SEDD) format, SCRIBE, etc, or other agency EDD formats

Provide technical support including documentation, training sessions, and Help Desk support for the ERLN data users and EPA-designated personnel to generate compliant EDD files to properly use ADR tool. Prepare monthly progress reports documenting the technical support activities provided via Help Desk phone system, or other assisting mechanism such as virtual meeting/fora, or web-based information pages. Help desk support should be based upon usage during normal government operating hours.

(Note: The Help Desk function for this contract is a buy-in to the existing Sample Management Operations (SMO) Help Desk provided to EPA's OSRTI. No further set-up of equipment or extra services is required).

Arrange and/or conduct ERLN EDD and/or WebEDR training sessions via on-site training and WEBINAR broadcasts (**for cost estimates, assume four (4) on-site meetings, and eight (8) WEBINAR broadcasts**) for EPA and EPA-designated personnel as directed by the USEPA WACOR. Prepare training presentation materials, as needed, in draft for EPA review, prior to finalizing.

Deliverable:

All requests through Task 5 shall be made through written Technical Direction. Deliverables shall be in the form of reports, either detailed, or summary as required through the TD. Required due dates of each deliverable will be noted in the TD.

Task 5 - Organize and Support Stakeholder Meetings

The contractor shall:

Support ERLN stakeholder meetings by gathering data and drafting reports necessary for meeting preparation, and preparing concise action items or summary and detailed reports from the stakeholder meetings. Stakeholders include EPA, states, and other federal agency participants in maintaining and operating the ERLN.

For estimating purposes, the contractor should anticipate long distance travel for five (5) trips anywhere in the continental US, Alaska, or Hawaii with each trip needing support of 3 contractors for 2 nights. The contractor shall also anticipate the potential of ten (12) instances of local travel in the Washington, DC area for 2 contractors.

Deliverable:

All requests through Task 5 shall be made through written Technical Direction. Deliverables shall be in the form of draft written reports, charts, and summary and detailed data reports. Required due dates of each deliverable will be noted in the TD. The contractor shall develop and deliver the draft reports via e-mail to the EPA WACOR, who will review, revise if necessary, and distribute to appropriate recipients.

Task 6: Support to ERLN During an EPA Emergency Response Activity or Exercise

The Contractor shall perform the following tasks:

Search Laboratory Compendium to obtain information related to laboratory capability and/or capacity. Information may include, but is not limited to, the number of laboratories with a specific capability or capacity, the location of laboratories within a specified geographic location, the name and point of contact of specific laboratories with specified capability and capacity, etc.

Coordinate with EPA WACOR and EPA on-site field staff (e.g. OSC, RPM, etc) to determine and compile accurate list of site analytical needs and requirements (e.g. analytical method required, special sample processing, sample delivery schedules, data turnaround times, etc.).

Draft Analytical Service Request (ASR) with site requirements. Submit ASR to appropriate group of ERLN laboratories, as determined via TD from WACOR for the purpose of seeking bids from the labs.

Track the number of samples that are being analyzed by ERLN laboratories during a response and make recommendation as to the availability of the laboratories to receive further samples.

Draft operational plans for conducting exercises involving ERLN assets, and facilitate the collection of information from the participating ERLN assets during the exercise. Facilitate hot wash meeting concerning the exercise and deliver a final report summarizing the activities and the outcomes of the exercise.

For the purpose of estimating costs associated with this task, the contractor can assume that four (4) exercises will be conducted requiring participation of six EPA ERLN assets (i.e., laboratories) per exercise.

Deliverable:

All requests through Task 6 shall be made through written Technical Direction. Deliverables shall be in the form of reports, either detailed, or summary as required through the TD. Required due dates of each deliverable will be noted in the TD according to the previously described Tier system.

Task 7 – Develop EPA Enterprise Interface in Laboratory Compendium

The contractor shall perform the following tasks:

Assist OEM in developing, testing and implementing an EPA Lab Enterprise interface/user view to the Laboratory Compendium. This assistance involves all “user characteristics,” including synchronizing the current EPA view to have similar characteristics if/when required.

Manage data entry to populate new values for data administration tables, including laboratory type, personnel, special services and analytical capabilities. Manage data entry to populate previous data from removed EPA laboratories to facilitate responses and render data management processes more efficient. Update existing schema via modifying existing tables and adding tables to accommodate more specific

information needs. These modifications and/or additions will enable collection of data regarding facility ownership (associating an entity to a facility where there may be many laboratories within a single facility) and type of space within a facility.

Develop new "landing" page for EPA Enterprise users. Develop a compiled enterprise report to download from new landing page.

Deliverable:

All requests through Task 7 shall be made through written Technical Direction. Deliverables shall be in the form of reports, either detailed, or summary as required through the TD. Required due dates of each deliverable will be noted in the TD.

V. SCHEDULE/DELIVERABLES

All work assigned under this WA with the exception of Tasks 0 and 1, shall be assigned through written Technical Directives (TD). TDs shall include specific reports, graphs, information, etc. needed for specific tasks, and shall also include the required delivery data of such report, etc.

The Contractor shall notify the EPA WACOR, EPA CL COR, and EPA CO when 75% of the LOE within the work assignment will be expended.

The Contractor shall obtain approval for all travel, in writing, by the EPA WACOR and CLCOR per contract requirements before any travel commences.

VI. REPORTING REQUIREMENTS

Monthly Progress Reports (including a progress evaluation discussion)

Financial Reports

Project Specific reports, minutes, summaries, etc., as directed through TD

VII. GREEN MEETINGS AND CONFERENCES

The contractor shall follow the provision of EPA prescription 1523.703-1, *Acquisition of environmentally preferable meeting and conference services (May 2007)*, for the use of off-site commercial facilities for an EPA event, whether the event is a meeting, conference, training session, or other purpose. Environmental preferability is defined at FAR 2.101, and shall be used when soliciting quotes or offers for meeting/conference services on behalf of the Agency.

VIII. CONFERENCES AND WORKSHOPS

The tasks under this work assignment do not require the acquisition of "off-site" facilities for conferences and meetings as defined in the IPN 12-05. And the events associated with this work assignment are not covered by EPA Order 1900.3 and do not require EPA Form 5170.

The contractor shall immediately alert the WA COR to any anticipated event under the work assignment

which may result in incurring an estimated \$20,000 or more cost, funded by EPA, specific to that event, meeting, training, etc. Those costs would include travel of both prime and consultant personnel, planning and facilitation costs, AV and rental of venue costs, etc. The EPA WACOR will then prepare approval internal paperwork for the event and will advise the contractor when appropriate signatures have been obtained. At that point, effort can proceed for the event. If the event is being sponsored by another EPA organization, the organization providing the planning is responsible for the approval.

Any event which meets the definition of a "conference," with total net expenditures greater than \$20,000, is required to submit EPA Electronic Form 5170 and Form 5170-A (with cost estimates/actuals). In the case the workflow system is down and CORs require emergency approval, they can submit EPA Form 5170 (PDF) (2pp, 93K) (with cost estimates) to conference@epa.gov.

IX. SOFTWARE APPLICATION AND ACCESSIBILITY (SECTION 508 REHABILITATION ACT AND AMENDMENTS)

Software Application files, if delivered to the Government, shall conform to the requirements relating to accessibility as detailed to the 1998 amendments to the Rehabilitation Act, particularly, but not limited to, § 1194.21 Software applications and operating systems and § 1194.22 Web-based intranet and internet information and applications. See: <http://www.section508.gov/>

Preferred text format:	MS Word, 8.0 or higher (Office 2007 or higher)
Preferred presentation format:	Power Point, Office 2007 or higher
Preferred graphics format:	Each graphic is an individual GIF file
Preferred portable format:	Adobe Acrobat, version 6.0

The WACOR shall identify which of delivered products will require 508 compliance.

QUALITY ASSURANCE SURVEILLANCE PLAN for WSD's Mission Support Quality Assurance Surveillance Plan

The requirements contained in this WA are considered performance-based, focusing on the Agency's desired results and outcomes. The contractor shall be responsible for determining the most effective means by which these requirements will be fulfilled. In order to fulfill the requirements, the contractor shall design innovative processes and systems that can deliver the required services in a manner that will best meet the Agency's performance objectives. This performance-based requirement represents a challenge to the contractor to develop and apply innovative and efficient approaches for achieving results and meeting or exceeding the performance objectives, measures, and standards described in Attachment 4 of the contract. The Contractor's performance will be reflected in the positive or negative

evaluation offered by the Agency in the Contractor Performance Evaluation (CPE) which is evaluated annually (per the "Contractor Performance Evaluation" clause in the contract). The WACOR shall submit a complete annual review of the areas outlined in the Quality Assurance Surveillance Plan (QASP), included in the contract, which will then be utilized by the CLCOR in preparing the overall evaluations submitted annually in response to the Contractor Performance Evaluation requirements in the contract.

EPAUnited States Environmental Protection Agency
Washington, DC 20460**Work Assignment**

Work Assignment Number

01-11

☐ Other☐ Amendment Number:

Contract Number

EP-C-15-012

Contract Period 08/01/2015 To 07/31/2017

Base

Option Period Number 1

Title of Work Assignment/SF Site Name

SRMD Radiochem Lab Audit Suppo

Contractor

CSC GOVERNMENT SOLUTIONS LLC

Specify Section and paragraph of Contract SOW

3.1.4

Purpose:



Work Assignment



Work Assignment Close-Out



Work Assignment Amendment



Incremental Funding



Work Plan Approval

Period of Performance

From 08/01/2016 To 07/31/2017

Comments:



Superfund

Accounting and Appropriations Data



Non-Superfund

SFO

(Max 2)



Note: To report additional accounting and appropriations data use EPA Form 1900-69A.

Line	DCN (Max 6)	Budget/FY (Max 4)	Appropriation Code (Max 6)	Budget Org/Code (Max 7)	Program Element (Max 9)	Object Class (Max 4)	Amount (Dollars)	(Cents)	Site/Project (Max 8)	Cost Org/Code
1										
2										
3										
4										
5										

Authorized Work Assignment Ceiling

Contract Period:

Cost/Fee:

LOE: 0

08/01/2015 To 07/31/2017

This Action:

2,080

Total:

2,080

Work Plan / Cost Estimate Approvals

Contractor WP Dated:

Cost/Fee

LOE:

Cumulative Approved:

Cost/Fee

LOE:

Work Assignment Manager Name Michella Karapondo

Branch/Mail Code:

Phone Number: 513-569-7141

FAX Number:

(Signature)

(Date)

Project Officer Name Nancy Parrotta

Branch/Mail Code:

Phone Number: 202-564-5260

FAX Number:

(Signature)

(Date)

Other Agency Official Name

Branch/Mail Code:

Phone Number:

(Signature)

(Date)

FAX Number:

Contracting Official Name Donna Reinhart

Branch/Mail Code:

Phone Number: 513-487-2114

FAX Number:

(Signature)

(Date)

**WORK ASSIGNMENT
PERFORMANCE WORK STATEMENT (PWS)**

Contract No. EP-C-15-012

Work Assignment: WA-01-11

WACOR: **Name:** Michella Karapondo
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 City, State, Zip: Cincinnati, OH 45268

LOE: 2080 hours

Period of Performance: August 1, 2016 to July 31, 2017

Title: SRMD Radiochem Lab Audit Support

PWS Sections: PWS Task 3.1.4, Laboratory Support Capabilities

I. PURPOSE:

The purpose of this work assignment is to provide technical assistance needed by Office of Water, Office of Ground Water and Drinking Water, Technical Support Center, Laboratory Certification Program, to evaluate the capability of selected laboratories analyzing samples for radiochemical contaminants in drinking water and provide recommendations about the drinking water certification status of these laboratories to the appropriate State and Regional

Certification Officers. To achieve this purpose the contractor shall be expected to conduct on-site audits and data audits of laboratories performing radiochemical analyses of drinking water compliance monitoring samples, and provide recommendations in reports and checklists to EPA and the appropriate State and Regional Certification Officers. This project supports programmatic support needs related to our national all hazards homeland security responsibilities by ensuring technical capability of laboratories analyzing drinking water samples for radiochemical contaminants.

This work assignment supports the mission of the Water Security Division (WSD) as described in the Water Security Strategy framework, which relates resources, activities, outputs, audience, short- and long- term outcomes to the WSD pillars of Prevention, Detection, Response, and Recovery. Additionally, this work assignment contributes to the commitments made in EPA's *Strategic Plan: 2011 to 2015* and EPA's *Homeland Security Strategy (2004)*. Under EPA's *Strategic Plan*, reference is made to Goal 2 (Clean and Safe Water), Objective 2.1 (Protecting Human Health), Sub-objective 2.1.1 (Water Safe to Drink), and to the Cross-Goal on homeland security. Under EPA's *Homeland Security Strategy*, reference is made to Objective 1 (Critical Infrastructure Protection).

In support of these requirements, this contract supports the nation's drinking and wastewater infrastructure, collectively known as the Water Sector, in being informed, coordinated, and prepared to prevent, detect, respond to, and recover from terrorist attack and other intentional acts, natural disasters, and other hazards (referred to as the "all hazards' approach), which may also occur, including the needs and challenges posed by natural disasters, catastrophic events, adaptation and impacts of climate change, floods, earthquakes, pandemic illness, and any other events which impact the safety and availability of our water supply.

In pursuit of these efforts, the contractor may be tasked with preparing a correlation summary comparing the results under this work assignment to the components of the Water Security Strategy framework.

II. BACKGROUND:

The National Primary Drinking Water Regulations require public water systems to monitor for certain radiological contaminants, as per 40 CFR 141.26. To ensure data quality, as well as to fulfill requirements of 40 CFR 141.28, drinking water compliance samples must be analyzed by laboratories certified by the State or EPA, using promulgated methods found in 40 CFR 141.25 or their equivalent, as determined by EPA in accordance with 40 CFR 141.27, for analyzing samples for radiochemical contamination. The Office of Ground Water and Drinking Water, Technical Support Center, Laboratory Certification Program oversees the certification of laboratories analyzing samples for drinking water compliance monitoring. EPA Regions are responsible for determining the certification status for the state principal laboratory system in each primacy state within the Region. One of the requirements for state primary enforcement responsibility ("primacy") under 40 CFR 142.10 is that states must have "laboratory facilities certified by the Administrator (EPA) and capable of performing analytical measurements of all

contaminants specified in the State primary drinking water regulations." Typically, EPA personnel from each Region have responsibility for conducting periodic laboratory audits of the state facilities to ensure laboratory capability and to grant certification to those laboratories. However, at this time, most EPA Regions lack the expertise to perform audits of laboratories performing radiochemical analysis of drinking water compliance monitoring samples. Effort provided by the contractor through this work assignment will provide EPA with technical expertise to conduct audits of radiochemistry laboratories and provide technical assistance to EPA to allow EPA to determine if those laboratories should be granted drinking water certification for the radiochemical analytical methods.

III. QA REQUIREMENTS:

Task 1 in this WA requires direct environmental measurements and/or the use of secondary data. Consistent with the Agency's Quality Assurance (QA) requirements, the contractor must prepare a Project Specific Quality Assurance Project Plan (PQAPP), to assure the quality of the data used under this WA. Work on this/these task(s) cannot proceed until the contractor receives notification of PQAPP approval from the Contract Level Contracting Officer's Representative (CL COR) via e-mail. The QA requirements must be addressed in the work plan and monthly progress reports as specified under Task 0, below.

IV. DETAILED TASK DESCRIPTION:

All direction under this WA will be provided as written technical direction from the WACOR, Alternate WACOR. If provided first as verbal technical direction to the contractor, it will be confirmed in writing within 5 calendar days, with a copy to the Contract Level Contracting Officer's Representative (CL COR) and the Contracting Officer (CO), and is subject to the limitations of the technical direction contract clause. Each initial deliverable shall be provided to the EPA WACOR and EPA CL COR in draft form for review and comment. The contractor shall incorporate WACOR review comments into revisions of the drafts. All drafts and final reports shall be approved by the WACOR.

The contractor shall perform the following tasks:

Task 0: Work Plan, Progress evaluations, and Monthly Progress Reports

1. If secondary data/QA project specific plan (PQAPP) required:

The contractor shall develop a WP that describes how each task will be carried out. The work plan shall include a schedule, staffing plan, level of effort (LOE), and cost estimate for each task, the contractor's key assumptions on which staffing plan and budget are based, and qualifications of proposed staff. In addition, the work plan shall include the requirement that all electronic and information technology (EIT) and all EIT deliverables be Section 508 compliant in accordance with the policies referenced at <http://www.epa.gov/accessibility/>. If a subcontractor(s) is proposed and subcontractors are outside the local metropolitan area, the

contractor shall include information on plans to manage work and contract costs.

In addition, the contractor shall prepare a PQAPP, as noted above, and ensure the quality of primary and/or secondary data used to complete these tasks. The monthly progress report shall indicate, in a separate QA section, whether significant QA issues have been identified and how they are being resolved. The WP shall explain when the PQAPP will be submitted based on the specific data requirements of the WA. Work on these tasks cannot proceed until the contractor receives notification of the new PQAPP approval from the CL COR via e-mail.

In each monthly progress report, the contractor shall, at the introduction to the discussion of this WA, discuss actual progress toward achieving the purpose of this work assignment, including problems encountered, issues that may need to be resolved, and anticipated timing for completing the goals of the WA. The contractor shall provide an overview of contract projects, striving to implement efficiencies in performance when complimentary requirements are issued. The contractor shall assure that duplication of effort relative to other ongoing WA under this contract is not occurring.

Deliverables: Work plan, PQAPP and monthly progress and financial reports.

Task 1: Audits of Radiochemistry Laboratories

The contractor shall assess the facilities, equipment, and scientific expertise of state principal laboratories which analyze samples for radiochemical contaminants in drinking water and determine compliance with the requirements of Chapters 1, 2, 3, and 6 of the Manual for the Certification of Laboratories Analyzing Drinking Water, the radiochemistry drinking water methods in 40 CFR 141.25 and Appendix A to Subpart C of 141 as well as Alternate Test Procedure radiochemistry methods approved by OGWDW for drinking water. As directed by the EPA WACOR, the contractor shall perform on-site audits of up to twelve radiochemical laboratories, including but not limited to laboratories acting as the state principal laboratories of Indiana, Kansas, Louisiana, Maine, Missouri, New Mexico, Ohio, and Vermont. Additional laboratories will be identified by technical direction. If a laboratory acting as a state principal laboratory has been granted drinking water certification by a recognized state certification program, the contractor shall first assess documentation supporting that drinking water certification decision, including Laboratory Quality Assurance Plans/Manuals, Standard Operating Procedures, Proficiency Testing results and supporting data, and other related materials to determine if the certification decision meets the aforementioned requirements. If the supporting documentation does not meet the requirements of the drinking water certification program, the contractor may perform an on-site audit of the lab as directed by the EPA WACOR. The listing of laboratories is subject to change due to scheduling and resources. In performing these audits, the contractor shall make it clear to all laboratory staff that they are working as a contractor to the Environmental Protection Agency. The contractor also shall indicate that all questions of policy must be directed to EPA since the contractor cannot represent the Agency. (PWS Task 3.1.4, Laboratory Support Capabilities)

Contractor personnel performing radiochemical laboratory audits shall be familiar with Chapters 1, 2, 3, and 6 of the Manual for the Certification of Laboratories Analyzing Drinking Water, the radiochemistry drinking water methods and analytical requirements in 40 CFR 141.25 as well as Alternate Test Procedure radiochemistry methods approved by OGWDW for drinking water, and audit checklists and other information provided by EPA. When possible, Regional and/or State Certification Officers will accompany the third party expert during the on-site audit. The contractor shall coordinate with regional and/or state personnel and the laboratory to schedule time for each audit with concurrence of the EPA WACOR. Audits should be scheduled such that some audits can be grouped by location to assist in reducing travel costs. The contractor shall copy all correspondence to the work assignment manager, including correspondence between the contractor and the Regional Certification Officer, and correspondence between the laboratory and the contractor should also be copied to the Regional Certification Officer and the EPA WACOR.

Prior to the audit, as needed, the EPA WACOR will hold a pre-audit teleconference with the Regional Certification Officer and the contractor to discuss scheduling the audit and to identify Regional preferences in conducting the audit. Prior to the scheduled audit, the contractor shall send a pre-audit checklist to the laboratory, allowing two weeks to respond. Example checklists can be found in Chapter 6 of the Manual for the Certification of Laboratories Analyzing Drinking Water. The contractor must either develop an audit checklist based on the aforementioned requirements, or use a checklist provided by the EPA WACOR. Items on the audit checklist must provide references to Chapters 1, 2, 3, and 6 of the Manual for the Certification of Laboratories Analyzing Drinking Water, the radiochemistry drinking water methods and analytical requirements in 40 CFR 141.25 as well as Alternate Test Procedure radiochemistry methods. Checklists must clearly identify "findings", or items found in the laboratory which conflict with drinking water regulations, including promulgated analytical methods and documents incorporated into regulation by reference, and "recommendations", or items identified that are not conflicting with drinking water regulations or promulgated analytical methods, but the addition of which would improve the analytical capabilities of the laboratory being audited.

Prior to the audit, the contractor shall review the response from the laboratory to be audited for completeness. The contractor may call the laboratory to address missing or unclear items. The items to be reviewed prior to the audit could include Laboratory Quality Assurance Plans, personnel listings, proficiency testing (PT) results, and other laboratory data as applicable. If the items to be reviewed prior to an audit are insufficient or incomplete, the audit may be rescheduled while the laboratory provides a complete set of documentation. Audits should follow the protocols found in Appendix B of the Manual for the Certification of Laboratories Analyzing Drinking Water.

While on-site at the laboratory, the audit should include a brief opening meeting with laboratory personnel, and prior to leaving the laboratory, a closing meeting should be held to discuss with the laboratory any "findings" that will be discussed in the audit report.

The contractor shall provide a written summary of the results of each audit, using guidelines provided by EPA. A copy of the completed audit checklist shall accompany each report. The report may include observations not included on the checklist. The report shall clearly identify "findings", or items found in the laboratory which conflict with drinking water regulations, including promulgated analytical methods and documents incorporated into regulation by reference, and "recommendations", or items identified that are not conflicting with drinking water regulations or promulgated analytical methods, but the addition of which would improve the analytical capabilities of the laboratory being audited. "Findings" and "recommendations" should be clearly referenced in the report to the appropriate section of the Manual for the Certification of Laboratories Analyzing Drinking Water, the appropriate section of the promulgated analytical method, or the section of the Code of Federal Regulations. The report may also identify "findings" where actual laboratory practices conflict with the laboratory's own Quality Assurance Manual and SOPs; these "findings" should be clearly referenced to the laboratory's Quality Assurance documents.

In addition, the report shall clearly identify the analytical methods for which the laboratory and/or Region has requested certification, and the certification status of each method shall be clearly identified. Drinking water certification statuses can be found in the Manual for the Certification of Laboratories Analyzing Drinking Water, in chapter 3, section 8. Reports shall be signed and dated by persons performing the audit. Reports shall be sent to the appropriate Certification Officer, as designated by the WACOR, and to the WACOR. Technical questions regarding the report shall be answered by the contractor with review and approval by the WAM; policy questions regarding the report shall be answered by the WACOR. If the EPA Region finalizes the draft lab evaluation report, the draft deliverable shall be considered the final evaluation report.

Deliverables: Draft and final lab evaluation reports and accompanying checklists. NOTE: If less than two weeks remain in the option period, the deliverable shall be the completed checklist and a listing of analytical methods and certification status for each method.

Task 2: Radiochemistry Technical Support.

The contractor will provide technical support regarding the use of radiochemistry methods, radiochemistry applications, and related health physics concerns in support of laboratory certification or preparedness. The contractor will maintain EPA's capacity to provide technical expertise by ensuring that the qualifications of assigned experts and technical response personnel meet the requirements of the Manual for the Certification of Laboratories Analyzing Drinking Water and current industry practices and standards. (PWS Task 3.1.4, Laboratory Support Capabilities)

Task 2 Assumptions and Constraints

The WACOR will provide technical direction to initiate work under this task.

Deliverables will be determined by the WACOR based on required response, and timing of such will be included on technical directives.

V. SCHEDULE/DELIVERABLES

Deliverable	Schedule
Work Plan	According to Contract
Checklist	As scheduled by the EPA WACOR by Written Technical Direction
On-site laboratory audits	As scheduled by the EPA WACOR by Written Technical Direction
Draft Lab Evaluation Report and Checklist	2 weeks after audit of laboratory
Final Lab Evaluation Report and Checklist	1 week after receipt of comments from WAM and CO if applicable.
Additional technical support	As directed by EPA WACOR by Written Technical Direction

VI. REPORTING REQUIREMENTS

Monthly Progress Reports (including a progress evaluation discussion)

Financial Reports

Project Specific PQAPP

VII. GREEN MEETINGS AND CONFERENCES

The contractor shall follow the provision of EPA prescription 1523.703-1, *Acquisition of environmentally preferable meeting and conference services (May 2007)*, for the use of off-site commercial facilities for an EPA event, whether the event is a meeting, conference, training session, or other purpose. Environmental preferability is defined at FAR 2.101, and shall be used when soliciting quotes or offers for meeting/conference services on behalf of the Agency.

VIII. CONFERENCES AND WORKSHOPS

The tasks under this work assignment do not require the acquisition of "off-site" facilities for conferences and meetings as defined in the IPN 12-05. AND the events associated with this work assignment are not covered by EPA Order 1900.3 and do not require EPA Form 5170.

The contractor shall immediately alert the WACOR to any anticipated event under the work assignment which may result in incurring an estimated \$20,000 or more cost, funded by EPA, specific to that event, meeting, training, etc. Those costs would include travel of both prime and consultant personnel, planning and facilitation costs, AV and rental of venue costs, etc. The EPA WACOR will then prepare for approval the internal paperwork for the event and will advise the contractor when appropriate signatures have been obtained. At that point, effort can

proceed for the event. If the event is being sponsored by another EPA organization, the organization providing the planning is responsible for the approval.

IX. SOFTWARE APPLICATION AND ACCESSIBILITY (SECTION 508 REHABILITATION ACT AND AMENDMENTS)

Software Application files, if delivered to the Government, shall conform to the requirements relating to accessibility as detailed to the 1998 amendments to the Rehabilitation Act, particularly, but not limited to, § 1194.21 Software applications and operating systems and § 1194.22 Web-based intranet and internet information and applications. See:
<http://www.section508.gov/>

Preferred text format:	MS Word, 8.0 or higher (Office 2007 or higher)
Preferred presentation format:	Power Point, Office 2007 or higher
Preferred graphics format:	Each graphic is an individual GIF file
Preferred portable format:	Adobe Acrobat, version 6.0

The WACOR shall identify which of delivered products will require 508 compliance.

QUALITY ASSURANCE SURVEILLANCE PLAN

Quality Assurance Surveillance Plan

The requirements contained in this WA are considered performance-based, focusing on the Agency's desired results and outcomes. The contractor shall be responsible for determining the most effective means by which these requirements will be fulfilled. In order to fulfill the requirements, the contractor shall design innovative processes and systems that can deliver the required services in a manner that will best meet the Agency's performance objectives. This performance-based requirement represents a challenge to the contractor to develop and apply innovative and efficient approaches for achieving results and meeting or exceeding the performance objectives, measures, and standards described in contract attachment 4. The Contractor's performance will be reflected in the positive or negative evaluation offered by the Agency in the Contractor Performance Evaluation (CPE) which is evaluated annually (per the "Contractor Performance Evaluation" clause in the contract). The WACOR shall submit a complete annual review of the areas outlined in the Quality Assurance Surveillance Plan (QASP), included in the contract, which will then be utilized by the CLCOR in preparing the overall evaluations submitted annually in response to the Contractor Performance Evaluation requirements in the contract.

EPAUnited States Environmental Protection Agency
Washington, DC 20460**Work Assignment**

Work Assignment Number

01-12

☐

Other

☐

Amendment Number:

Contract Number
EP-C-15-012

Contract Period 08/01/2015 To 07/31/2017

Title of Work Assignment/SF Site Name

Nat'l Homeland Secur Research

Contractor
CSC GOVERNMENT SOLUTIONS LLC

Specify Section and paragraph of Contract SOW

2.7, 2.8.1, 2.8.2, 2.8.3, 2.8.4, 2.9, 3.1

Purpose:

☒

Work Assignment

☐

Work Assignment Close-Out

☐

Work Assignment Amendment

☐

Incremental Funding

☐

Work Plan Approval

Period of Performance

From 08/01/2016 To 07/31/2017

Comments:

☐

Superfund

Accounting and Appropriations Data

☒

Non-Superfund

SFO
(Max 2)☐

Note: To report additional accounting and appropriations data use EPA Form 1900-69A.

Line	DCN (Max 6)	Budget/FY (Max 4)	Appropriation Code (Max 6)	Budget Org/Code (Max 7)	Program Element (Max 9)	Object Class (Max 4)	Amount (Dollars)	(Cents)	Site/Project (Max 8)	Cost Org/Code
1										
2										
3										
4										
5										

Authorized Work Assignment Ceiling

Contract Period:

08/01/2015 To 07/31/2017

Cost/Fee:

LOE: 0

This Action:

2,211

Total:

2,211

Work Plan / Cost Estimate Approvals

Contractor WP Dated:

Cost/Fee

LOE:

Cumulative Approved:

Cost/Fee

LOE:

Work Assignment Manager Name Kathy Hall

Branch/Mail Code:

Phone Number: 513-379-5260

FAX Number:

(Signature)

(Date)

Project Officer Name Nancy Parrotta

Branch/Mail Code:

Phone Number: 202-564-5260

FAX Number:

(Signature)

(Date)

Other Agency Official Name

Branch/Mail Code:

Phone Number:

(Signature)

(Date)

Contracting Official Name Donna Reinhart

Branch/Mail Code:

Phone Number: 513-487-2114

FAX Number:

(Signature)

(Date)

**Work Assignment (WA)
Performance Work Statement (PWS)**

**WSD Contract No: EP-C-15-012
Work Assignment WA-01-12**

Work Assignment Contract Officer Representative (WACOR):

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LOE: 2210

Period of performance: August 1, 2016 to July 31, 2017

Title: National Homeland Security Research Center Selected Analytical Methods for Environmental Remediation and Recovery & Method Development

WSD Contract SOW Areas: 2.7, 2.8.1, 2.8.2, 2.8.3, 2.8.4, 2.9, 3.1.2, 3.1.3, 3.1.4, 3.1.9, 3.1.10, 3.1.14, 3.1.17, 3.1.19

I. PURPOSE

The purpose of this work is to provide continued support for the Environmental Protection Agency (EPA) National Homeland Security Research Center (NHSRC) initiatives in updating the Selected Analytical Methods for Environmental Remediation and Recovery (SAM); identifying, developing, and verifying analytical methods that can be used by multiple laboratories analyzing environmental samples during environmental remediation following a homeland security event; developing selected analytical and sample collection procedures; coordinating document reviews and revisions including compiling and responding to comments; facilitating procedure verifications; supporting an interactive web page including development and maintenance; and developing, revising and testing tools. These sampling and analytical methods and supporting documents, web page, and tools address the chemical, radiological, and biological analytes (CBR) listed in NHSRC's SAM document, and support EPA laboratory networks, including the Environmental Response Laboratory Network (ERLN) and Water Laboratory Alliance (WLA).

Importantly, analytical methods verified under this Work Assignment (WA) shall be demonstrated to assure that their performance characteristics (e.g. accuracy, limit of detection and robustness) meet site remediation goals, i.e. site clearance, for re-occupation as existed prior to the contamination event. This project supports programmatic needs related to our national all hazards homeland security responsibilities of Securing and Sustaining Water Systems by protecting water systems from terrorist attacks and inadvertent disasters and detecting and recovering from successful attacks and the effects of disasters by leading efforts to provide States and water utilities with guidance, tools and strategies.

To achieve this purpose, the contractor shall provide technical, analytical, study coordination, and computer support. NHSRC will continue to coordinate with subject matter experts involved in developing SAM, including representatives from EPA Offices, EPA and State laboratories and representatives from the U.S. Centers for Disease Control and Prevention (CDC), Department of Agriculture (USDA), Food and Drug Administration (FDA), and U.S. Department of Homeland Security (DHS). NHSRC also will continue working with representatives from the Office of Solid Waste and Emergency Response (OSWER) and Office of Water (OW), where appropriate, to leverage and avoid duplication of existing efforts.

Under this work assignment, the contractor shall provide technical support to EPA's development of SAM, SAM addendums and companion documents, development and verification of selected analytical and sample collection procedures and protocols, development and maintenance of an interactive web site, and development and verification of laboratory methods to identify and measure chemical, radiological and biological analytes included in SAM. Contractor support will be required in the following areas:

- I Data exchange, management, and review
- I Single lab verification leading to multi-laboratory method validation studies
- I Document development
- I Document revisions. The contractor shall verify each document as drafted and conduct minor revisions as needed. If necessary, major revisions need to be promptly identified such that EPA can determine appropriate follow-on actions.
- I Web page modifications and support

II. BACKGROUND:

After 9/11, EPA initiated an Environmental Response Laboratory Network (ERLN). The need to establish a network of laboratories to effectively respond to possible contamination scenarios resulting from terrorist attacks was identified as a national vulnerability. EPA will be responsible for the analysis of a large number of environmental samples in a short period of time putting a large demand on the nation's laboratory systems with respect to capacity and capability. NHSRC has the responsibility to research analytical methods to support the laboratories in measuring the many possible CBR agents that could be used in such attacks. Along with its partners, EPA has developed a document, *Selected Analytical Methods for Environmental Remediation and Recovery* (SAM) that compiles analytical methods which can be used during the remediation phase of cleanup. EPA is also working on additional documents such as collection procedures, companion documents, and analytical protocols which support the SAM. This work is designed to help assure analytical methods exist to quickly and accurately identify selected agents and quantify residual contamination levels following decontamination.

III. QA REQUIREMENTS

Task(s) 2 through 5 in this WA require the use of primary and/or secondary data. Consistent with the Agency's Quality Assurance (QA) requirements, the contractor must prepare a Project Specific Quality

Assurance Project Plan (PQAPP), to assure the quality of the data used under this WA. Work on this/these task(s) cannot proceed until the contractor receives notification of PQAPP approval from the Contract Level Contracting Officer's Representative (CL COR) via e-mail. The QA requirements must be addressed in the work plan and monthly progress reports as specified under Task 0, below.

In addition, the work plan shall not include the requirement that all electronic and information technology (EIT) and all EIT deliverables be Section 508 compliant in accordance with the policies referenced at <http://www.epa.gov/accessibility/>. NHSRC has a separate contract vehicle that handles 508 compliance across the Center within the Immediate Office rather than have each project and task include it in various contracts and work assignments. Deliverables which will be needed to be made 508 compliant as part of the option period will be designated as such in the task narrative and delivery table.

IV. DETAILED TASK DESCRIPTION:

All direction under this WA will be provided as written technical direction from the WACOR, Alternate or WACOR as appropriate. If provided first as verbal technical direction to the contractor, it will be confirmed in writing within 5 calendar days, with a copy to the CL COR and the Contracting Officer (CO), and is subject to the limitations of the technical direction contract clause. Each initial deliverable shall be provided to the EPA WACOR in draft form for review and comment. The contractor shall incorporate WACOR/ review comments into revisions of the drafts. All drafts and final reports shall be approved by the WACOR.

The contractor shall perform the following tasks:

The contractor shall perform the following tasks in support of SAM, SAM addendums, SAM compendiums, development and verification of selected analytical and sample collection procedures, development and maintenance of a interactive web site and method development/verification addressing SAM analytes that may include 1) chemical 2) biological 3) radiological and 4) biotoxins.

Task 0: Work Plan, Progress evaluations, and Monthly Progress Reports

The contractor shall develop a WP that describes how each task will be carried out. The work plan shall include a schedule, staffing plan, level of effort (LOE), and cost estimate for each task, the contractor's key assumptions on which staffing plan and budget are based, and qualifications of proposed staff. In addition, the work plan shall include the requirement that all electronic and information technology (EIT) and all EIT deliverables be Section 508 compliant in accordance with the policies referenced at <http://www.epa.gov/accessibility/>. If a subcontractor(s) is proposed and subcontractors are outside the local metropolitan area, the contractor shall include information on plans to manage work and contract costs.

In addition, the contractor shall prepare a PQAPP, as noted above, and ensure the quality of primary and/or secondary data used to complete these tasks. The monthly progress report shall indicate, in a separate QA section, whether significant QA issues have been identified and how they are being resolved. The WP shall explain when the PQAPP will be submitted based on the specific data requirements of the WA. Work on these tasks cannot proceed until the contractor receives notification of the new PQAPP approval from the CL COR via e-mail.

In each monthly progress report, the contractor shall, at the introduction to the discussion of this WA, discuss actual progress toward achieving the purpose of this work assignment, including problems encountered, issues that may need to be resolved, and anticipated timing for completing the goals of the

WA. The contractor shall provide an overview of contract projects, striving to implement efficiencies in performance when complimentary requirements are issued. The contractor shall assure that duplication of effort relative to other ongoing WA under this contract is not occurring.

Deliverables: Work plans, monthly progress and financial reports.

Task 1: Quality Assurance Project Plan (QAPP)

The contractor shall prepare a QAPP(s) in accordance with Quality Assurance (QA) Category B. Attachment 1 to this Performance Work Statement (PWS) provides information regarding **NHSRC QA Requirements/Definitions List**.

QAPPs prepared for a Category B (formerly known as a Category 3 or 4) project must be developed in accordance with the document titled "EPA Requirements for Quality Assurance Project Plans." EPA QA/R-5 can be found at <https://www.epa.gov/sites/production/files/2015-07/documents/r5-final.pdf> and QAPPS must be approved by an EPA Quality Assurance Manager (QAM) prior to the start of any literature searches (existing data), data collection, gathering, synthesizing, or data generation (laboratory) work.

At the discretion of the COR, Category B QAPP(s) can be either based on the R5 guidance (described above) or a project-specific QA requirements provided by the PI.

Additional information related to QA requirements can be found at www.epa.gov/quality.

The contractor must prepare Quality Assurance Project Plan(s) for approval by NHSRC. Work on NHSRC tasks cannot proceed until the contractor receives notification from the PO via e-mail that utilization of the QAPP is approved for use.

Deliverables: Quality Assurance Project Plan(s) (QAPP[s]).

Task 2: Selected Analytical Methods for Environmental Remediation and Recovery (SAM) application (website)

Maintenance: The contractor shall maintain the current SAM application (website). The contractor shall provide application (website) maintenance and monitoring, including, but not limited to, checks of broken links, logging of comments and response to comments. The application (website) shall provide links as needed to SAM companion documents, past SAM revisions, analytical protocols, and sample collection plans.

Searchability of Sample Collection Information Documents (SCID) in query tool: The contractor will begin development of a query tool to provide search capabilities of the SCIDs.

Document Uploads: The contractor shall upload and make searchable the SAM 2017 document and newly revised SAM companion Sample Collection Information Documents (SCID) after revisions are complete. The Contractor shall upload newly developed SAM related sample collection procedures.

The Contractor is requested to propose specific steps/activities necessary to achieve desired goals.

Deliverables: Functional interactive application (website) updated as directed by WACOR or Alternate WACOR

Task 3: Selected Analytical Methods for Environmental Remediation and Recovery (SAM)

Attachment #1 to the Statement of Work
Revision 3. September 21, 2015
NHSRC 06/02

The Contractor shall support NHSRC in the publishing of SAM 2017 and addendums as requested.

- SAM 2017: The Contractor shall support NHSRC in the updating and publishing of SAM revisions as needed. The Contractor shall support the planning and execution of each revision including (but not limited to): participate on SAM Core Team and/or workgroup meetings when requested, perform literature searches in support of SAM workgroup activities, prepare meeting minutes, coordinate reviews (up to separate 5 reviews [work group, extended technical peer, QA, tech edit, management] for this revision cycle), collect review comments, develop response to comment documentation for each review, resolution of comments with EPA WACOR/Alternate WACOR, prepare draft documents, prepare final document.
- Addendums: The Contractor shall support the planning and execution of each addendum including (but not limited to): develop the addendum, assist the EPA WACOR/Alternate WACOR with resolution of review comments as requested, prepare draft documents, prepare a final document, and post to the website.

Deliverables:

- SAM 2017: Final draft document ready for management review (STICS).

Task 4: SAM Companion Documents

The Contractor shall plan and execute, as requested, preparation of and /or updates to existing SAM related/companion documents. Document revision information may be generated during SAM 2017 workgroup sessions. This shall include, as applicable, up to 4 cycles of document review requiring coordination, collection of comments, preparation of response to comment documents, resolution of comments with EPA WACOR/Alternate WACOR, and updating draft document based on received and accepted comments, and preparing final documents.

Deliverables: Final documents as requested by EPA.

Task 5: Technical Support for SAM Chemical and Radiochemical Methods, Procedures, and Related Evaluation Studies

The Contractor shall provide technical support for work related to chemical and radiochemical SAM products and chemical and radiochemical SAM methods verification. This shall include (but not limited to) the development of method reports, guidance documents, sample collection documents; statistical data analysis; study collaboration efforts; data review and analysis; preparation of comment/response documentation; participation in meetings and related meeting documentation; preparation of presentation and meeting materials in support of, but not limited to, the below listed projects:

- The contractor shall provide support in the development of the radiological sampling strategy document for building materials.
- The contractor shall provide support in the revision of the *Sample Collection Procedures for Radiochemical Analytes in Environmental Matrices* (2012 revision) to match information in SAM 2017 and add information that was put into the sample collection procedure for building materials.

Deliverables: See Section V

V. SCHEDULE/DELIVERABLES

Task	Deliverable	Due date
0	Monthly Report	Per contract requirements
1	QAPP	Revise/Draft 30 days after contract award, updated as necessary thereafter.
2	SAM Application (web site) Application: SCID Searchability: Modified SAM Query tool to search SCIDs Document Uploads:	Updated upon EPA request*, updated for a new revision of SAM with 30 days of SAM being published. Determined when requested by EPA* Determined when requested by EPA*
3	SAM Revision SAM 2017: Final draft document ready for management review (STICS).	Draft document by July 31, 2017
4	SAM Companion Documents Chemistry/Radiochemistry SCID Pathogen/Biotxin SCID	Final SCID documents determined when requested by EPA*
5	Chemical and Radiochemical SAM products and SAM methods Sample collection strategy procedure for building materials Revised Sample Collection Procedure for Environmental Matrices	Draft document by July 31, 2017. Final revised document by July 31, 2017.

* EPA will determine a schedule for delivery of a document/web update at the time of request

VI. REPORTING REQUIREMENTS

- I Monthly Progress Reports (including a progress evaluation discussion)
- I Financial Reports
- I Project Specific PQAPP (if applicable)

VII. GREEN MEETINGS AND CONFERENCES

The contractor shall follow the provision of EPA prescription 1523.703-1, *Acquisition of environmentally preferable meeting and conference services (May 2007)*, for the use of off-site commercial facilities for an

EPA event, whether the event is a meeting, conference, training session, or other purpose. Environmental preferability is defined at FAR 2.101, and shall be used when soliciting quotes or offers for meeting/conference services on behalf of the Agency.

The tasks under this work assignment do not require the acquisition of "off-site" facilities for conferences and meetings as defined in the IPN 12-05. AND the events associated with this work assignment are not covered by EPA Order 1900.3 and do not require EPA Form 5170.

The contractor shall immediately alert the WACOR to any anticipated event under the work assignment which may result in incurring an estimated \$20,000 or more cost, funded by EPA, specific to that event, meeting, training, etc. Those costs would include travel of both prime and consultant personnel, planning and facilitation costs, AV and rental of venue costs, etc. The EPA WACOR will then prepare for approval the internal paperwork for the event and will advise the contractor when appropriate signatures have been obtained. At that point, effort can proceed for the event. If the event is being sponsored by another EPA organization, the organization providing the planning is responsible for the approval.

Any event which meets the definition of a "conference," with total net expenditures greater than \$20,000, is required to submit EPA Electronic Form 5170 and Form 5170-A (with cost estimates/actuals). In the case the workflow system is down and CORs require emergency approval, they can submit EPA Form 5170 (PDF) (2pp, 93K) (with cost estimates) to conference@epa.gov.

IX. SOFTWARE APPLICATION AND ACCESSIBILITY (SECTION 508 REHABILITATION ACT AND AMENDMENTS)

Software Application files, if delivered to the Government, shall conform to the requirements relating to accessibility as detailed to the 1998 amendments to the Rehabilitation Act, particularly, but not limited to, § 1194.21 Software applications and operating systems and § 1194.22 Web-based intranet and internet information and applications. See: <http://www.section508.gov/>

Preferred text format:	MS Word, 8.0 or higher (Office 2007 or higher)
Preferred presentation format:	Power Point, Office 2007 or higher
Preferred graphics format:	Each graphic is an individual GIF file
Preferred portable format:	Adobe Acrobat, version 6.0

The WACOR shall identify which of delivered products will require 508 compliance.

QUALITY ASSURANCE SURVEILLANCE PLAN
for WSD's Mission Support

Quality Assurance Surveillance Plan

The requirements contained in this WA are considered performance-based, focusing on the Agency's desired results and outcomes. The contractor shall be responsible for determining the most effective means by which these requirements will be fulfilled. In order to fulfill the requirements, the contractor shall design innovative processes and systems that can deliver the required services in a manner that will best meet the Agency's performance objectives. This performance-based requirement represents a challenge to the contractor to develop and apply innovative and efficient approaches for achieving results and meeting or exceeding the performance objectives, measures, and standards in Attachment 4 of the contract. The Contractor's performance will be reflected in the positive or negative evaluation offered by the Agency in the Contractor Performance Evaluation (CPE) which is evaluated annually (per the "Contractor Performance Evaluation" clause in the contract). The WACOR shall submit a complete annual review of the areas outlined in the Quality Assurance Surveillance Plan (QASP), included in the contract, which will then be utilized by the CLCOR in preparing the overall evaluations submitted annually in response to the Contractor Performance Evaluation requirements in the contract.

Attachment 1: NHSRC QA Requirements/Definitions List

EPA's Quality System Website: <http://www.epa.gov/quality>

In accordance with EPA CIO 2105.0 (Order), EPA 2105-P-01-0 (Manual), and conformance to ANSI/ASQC E4 must be demonstrated by submitting the quality documentation described herein. All Quality documentation shall be submitted to the Government for review. The Government will review and return the quality documentation, with comments, and indicate approval or disapproval. If the quality documentation is not approved, it must be revised to address all comments and shall be resubmitted to the Government for approval. Work involving environmental data collection, generation, use, or reporting shall not commence until the Government has approved the quality documentation. The Quality Assurance Project Plan (QAPP) shall be submitted to the Government at least thirty (30) days prior to the beginning of any environmental data gathering or generation activity in order to allow sufficient time for review and revisions to be completed. After the Government has approved the quality documentation, the Contractor shall also implement it as written and approved by the Government.

NHSRC's Quality System Specifications for Extramural Actions –

These requirements typically pertain to single project efforts. The five specifications are:

- (1) a description of the organization's Quality System (QS) and information regarding how this QS is documented, communicated and implemented;
- (2) an organizational chart showing the position of the QA function;
- (3) delineation of the authority and responsibilities of the QA function;
- (4) the background and experience of the QA personnel who will be assigned to the project; and
- (5) the organization's general approach for accomplishing the QA specifications in the SOW.

NHSRC QA Requirements/Definitions List

Category Level Designations (determines the level of QA required):

- ☐ **Category A Project (formerly Category 1 and 2)** – applies to research that is anticipated to result in high-visibility products. In this case, the QAPP shall address all elements listed in “EPA Requirements for QA Project Plans, EPA QA/R-5. <http://www.epa.gov/quality/qs-docs/r5-final.pdf>

Research of this nature meets one or more of the following criteria:

- Results are ISI
- Has a high probability the results could be used in litigation or enforcement
- Is a HISA
- Direct regulatory support

- ☐ **Category B Project (formerly Category 3 and 4)** - applicable to projects that do not meet the criteria for Category A. In lieu of using “EPA Requirements for QA Project Plans, EPA QA/R-5, a QAPP may be developed in accordance with NHSRC’s QAPP requirement templates. This decision is made by the Principal Investigator or lead researcher.

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Additional information regarding QAPP requirements for a specific project type are provided below.

Project Types:

NHSRC’s QAPP Requirements templates are available for Applied Research Projects, Sampling and analysis Project, Method Development Project, and Existing Data Project. These templates are condensed from applicable sections of R-5 (EPA Requirements for QA Project Plans) and are intended to serve as a starting point when preparing a QAPP. These templates and their format may not fit every research scenario and QAPP’s must conform to applicable sections of R-5 in a way that fully describes the research plan and appropriate QA and QC measures to ensure that the data are of adequate quality and quantity to fit their intended purpose.

- ☐ **Applied Research Project** - pertains to a study performed to generate data to demonstrate the performance of accepted processes or technologies under defined conditions. These studies are often pilot- or field-scale.
- ☐ **Sampling and Analysis Project** - pertains to the collection and analysis of samples with no objectives other than to provide characterization or monitoring information.
- ☐ **Existing Data Project** - pertains to environmental data collected from other sources, by or for EPA, that are used for purposes other than those originally intended. Sources may include: literature, industry surveys, compilations from computerized databases and information systems, and computerized or mathematical models of environmental processes.
- ☐ **Method Development Project** - pertains to situations where there is no existing standard method, or a standard method needs to be significantly modified for a specific application.

For other types of project types, the EPA Guidance documents are available. All QAPPs must conform to applicable sections of R-5 in a way that fully describes the research plan and appropriate QA and QC measures to ensure that the data are of adequate quality and quantity to fit their intended purpose. The specific and general guidance documents can be found at http://www.epa.gov/quality/qa_docs.html#guidance

- ☐ **Design, Construction, and/or Operation of Environmental Technology Project** - pertains to environmental technology designed, constructed and/or operated by and/or for EPA. The QAPP shall address requirements in the EPA Quality System document "Guidance on Quality Assurance for Environmental Technology Design, Construction, and Operation" (EPA QA/G-11)
- ☐ **Geospatial Data Quality Assurance Project** - pertains to data collection; data processing and analysis; and data validation of geospatial applications. The QAPP shall address requirements in the EPA Quality System document "Guidance for Geospatial Data Quality Assurance Project Plans" EPA QA /G-5S).
- ☐ **Model Development Project** - includes all types of mathematical models including static, dynamic, deterministic, stochastic, mechanistic, empirical, etc. The QAPP shall address requirements in the EPA Quality System document "Guidance for Quality Assurance Project Plans for Modeling" (EPA QA/G-5M)

Definitions:

Environmental Data - These are any measurement or information that describe environmental processes, location, or conditions; ecological or health effects directly from measurements, produced from software and models, and compiled from other sources such as data bases or the literature. For EPA, environmental data include information collected directly from measurements, produced from software and models, and compiled from other sources such as data bases or literature.

Incremental Funding - Incremental funding is partial funding, no new work.

Quality Assurance (QA) - Quality assurance is a system of management activities to ensure that a process, item, or service is of the type and quality needed by the customer. It deals with setting policy and running an administrative system of management controls that cover planning, implementation, and review of data collection activities and the use of data in decision making. Quality assurance is just one part of a quality system.

Quality Assurance Project Plan (QAPP) - A QAPP is a document that describes the necessary quality assurance, quality control, and other technical activities that must be implemented to ensure that the results of the work performed will satisfy the stated performance criteria. A QAPP documents project-specific information.

Quality Control (QC) - Quality control is a technical function that includes all the scientific precautions, such as calibrations and duplications, which are needed to acquire data of known and adequate quality.

Quality Management Plan (QMP) - A QMP is a document that describes an organization's/program's quality system in terms of the organizational structure, policy and procedures, functional responsibilities of management and staff, lines of authority, and required

interfaces for those planning, implementing, documenting, and assessing all activities conducted. A QMP documents the overall organization/program, and is primarily applicable to multi-year, multi-project efforts. An organization's/program's QMP shall address all elements listed in the "Requirements for Quality Management Plans" in Appendix B of the NHSRC QMP.

Quality System - A quality system is the means by which an organization manages its quality aspects in a systematic, organized manner and provides a framework for planning, implementing, and assessing work performed by an organization and for carrying out required quality assurance and quality control activities.

R-2. EPA Requirements for Quality Management Plans (EPA/240/B-01/002) March, 2001
<http://www.epa.gov/quality/qs-docs/r2-final.pdf>

R-5. EPA Requirements for Quality Management Plans (EPA/240/B-01/002) March, 2001
<http://www.epa.gov/quality/qs-docs/r5-final.pdf>

Substantive Change - Substantive change is any change in an activity that may alter the quality of data being used, generated, or gathered.

Principal Investigator (PI) - This person is technically responsible for the project. For extramural contract work, the PI is typically the contracting officer's representative (COR). For intramural work, the lead researcher is typically the Principal Investigator.

Abbreviations:

COR	Contracting Officer's Representative	IAG	Interagency Agreement
NHSRC	National Homeland Security Research Center	QA	Quality Assurance
QA ID	Quality Assurance Identification	QAM	Quality Assurance Manager
QAPP	Quality Assurance Project Plan	QMP	Quality Management Plan
QS	Quality System	SOW	Statement of Work
PI	Principal Investigator	CRADA	Cooperative Research & Development Agreement

EPAUnited States Environmental Protection Agency
Washington, DC 20460**Work Assignment**

Work Assignment Number

01-12

☐ Other ☒ Amendment Number:
000001

Contract Number

EP-C-15-012

Contract Period 08/01/2015 To 07/31/2017

Base

Option Period Number 1

Title of Work Assignment/SF Site Name

Nat'l Homeland Secur Research

Contractor

CSRA LLC

Specify Section and paragraph of Contract SOW

2.7, 2.8.1, 2.8.2, 2.8.3, 2.8.4, 2.9, 3.1

Purpose:

☐

Work Assignment

☐

Work Assignment Close-Out

☒

Work Assignment Amendment

☐

Incremental Funding

☐

Work Plan Approval

Period of Performance

From 10/28/2016 To 07/31/2017

Comments:

The purpose of this amendment 1 to CSRA (EP-C-15-012) WA 01-12 is to add a new task 6 - technical support for microbial data usability MicroSAP companion document, task 7 - technical support for Methods for Environmental Remediation and Recovery (SAM) biological methods and task 8 - technical support for SAM

☐

Superfund

Accounting and Appropriations Data

☒

Non-Superfund

Note: To report additional accounting and appropriations data use EPA Form 1900-69A.

SFO
(Max 2)☐

Line	DCN (Max 6)	Budget/FY (Max 4)	Appropriation Code (Max 6)	Budget Org/Code (Max 7)	Program Element (Max 9)	Object Class (Max 4)	Amount (Dollars)	(Cents)	Site/Project (Max 8)	Cost Org/Code
1										
2										
3										
4										
5										

Authorized Work Assignment Ceiling

Contract Period:

Cost/Fee:

LOE: 2,211

08/01/2015 To 07/31/2017

This Action:

910

Total:

3,121

Work Plan / Cost Estimate Approvals

Contractor WP Dated:

Cost/Fee

LOE:

Cumulative Approved:

Cost/Fee

LOE:

Work Assignment Manager Name Kathy Hall

Branch/Mail Code:

Phone Number: 513-379-5260

FAX Number:

(Signature)

(Date)

Project Officer Name Nancy Parrotta

Branch/Mail Code:

Phone Number: 202-564-5260

FAX Number:

(Signature)

(Date)

Other Agency Official Name

Branch/Mail Code:

Phone Number:

FAX Number:

(Signature)

(Date)

Contracting Official Name Donna Reinhart

Branch/Mail Code:

Phone Number: 513-487-2114

FAX Number:

(Signature)

(Date)

EPAUnited States Environmental Protection Agency
Washington, DC 20460**Work Assignment**

Work Assignment Number

01-13

☐ Other☐ Amendment Number:Contract Number
EP-C-15-012

Contract Period 08/01/2015 To 07/31/2017

Title of Work Assignment/SF Site Name

Base

Option Period Number 1

Security Program & Assessment

Contractor

CSRA LLC

Specify Section and paragraph of Contract SOW

2.1, 2.3, 2.4, 2.5, 2.14, 2.16

Purpose:



Work Assignment



Work Assignment Close-Out



Work Assignment Amendment



Incremental Funding



Work Plan Approval

Period of Performance

From 08/01/2016 To 07/31/2017

Comments:



Superfund

Accounting and Appropriations Data



Non-Superfund

SFO

(Max 2)



Note: To report additional accounting and appropriations data use EPA Form 1900-69A.

Line	DCN (Max 6)	Budget/FY (Max 4)	Appropriation Code (Max 6)	Budget Org/Code (Max 7)	Program Element (Max 9)	Object Class (Max 4)	Amount (Dollars)	(Cents)	Site/Project (Max 8)	Cost Org/Code
1										
2										
3										
4										
5										

Authorized Work Assignment Ceiling

Contract Period:

Cost/Fee:

LOE: 0

08/01/2015 To 07/31/2017

This Action:

1,550

Total:

1,550

Work Plan / Cost Estimate Approvals

Contractor WP Dated:

Cost/Fee

LOE:

Cumulative Approved:

Cost/Fee

LOE:

Work Assignment Manager Name Kenneth Stone

Branch/Mail Code:

Phone Number: 513-569-7474

FAX Number:

(Signature)

(Date)

Project Officer Name Nancy Parrotta

Branch/Mail Code:

Phone Number: 202-564-5260

FAX Number:

(Signature)

(Date)

Other Agency Official Name Erin Ridder

Branch/Mail Code:

Phone Number: 513-487-2155

FAX Number:

(Signature)

(Date)

Contracting Official Name Sandra Stargardt-Licis

Branch/Mail Code:

Phone Number: 513-487-2006

FAX Number:

(Signature)

(Date)

**WORK ASSIGNMENT (WA)
PERFORMANCE WORK STATEMENT (PWS)**

Contract No. EP-C-15-012

Work Assignment: WA-01-13

WACOR:	Name:	Kenneth R Stone
	Branch:	Immediate Office (IO)
	Division:	National Homeland Security Research Center
	Office:	Office of Research & Development
	Phone:	513-569-7474
	FAX:	513-487-2555
	E-mail:	stone.kenneth@epa.gov
	Mail code:	NG16
	Street Address:	26 Martin Luther King Blvd
	City, State, Zip:	Cincinnati, Ohio 45230

Alt WACOR:	Name:	Franz B Ott
	Branch:	Immediate Office (IO)
	Division:	National Homeland Security Research Center
	Office:	Office of Research & Development
	Phone:	513-569-7171
	FAX:	513-487-2555
	E-mail:	ott.franz@epa.gov
	Mail code:	NG16
	Street Address:	26 Martin Luther King Blvd
	City, State, Zip:	Cincinnati, Ohio 45230

LOE: 1750 hours

Period of Performance: August 1, 2016 to July 31, 2017

Title: Security Program Assessment & Review (SPAR)

PWS Sections: 2.1, 2.3, 2.4, 2.5, 2.14, 2.16

I. PURPOSE:

Each of the following elements should be included when formulating this section of your work assignment.

The purpose of this work assignment is to support the National Homeland Security Research Center's (NHSRC) Information Security (INFOSEC) program to ensure the security of NHSRC information.

To achieve this purpose the contractor shall be expected to: (1) provide services to conduct Risk Assessed Security Program (RASP) reviews of NHSRC research products to determine the sensitivity of information they contain; (2) make recommendations for designation as unclassified or unclassified/FOUO, as appropriate; (3) make recommendations for the classification of National Security Information (NSI), as appropriate (The contractor shall be supplied with Agency classification guidance for this purpose.); (4) provide portion marking and classification justifications derived from Agency classification guidance; (5) support updates and revisions to classification guidance and provide guidance memoranda by project as directed.

This project supports programmatic support needs related to our national all hazards homeland security responsibilities by meeting NHSRC/ORD requirements under the Presidential Policy Directive/PPD-21, Critical Infrastructure Security and Resilience, and the Executive Order 13526, Classification of National Security Information.

II. BACKGROUND:

The NHSRC is charged with handling and securing classified information. The purpose of the NHSRC INFOSEC program is to ensure that such information is quickly identified and controlled to prevent release to parties that may exploit it for harm to the American people. This mission is accomplished through the early identification of sensitive information under the RASP, the correct marking of such information for controlled utilization by researchers, partners and clients and the safeguarding at the appropriate level information that possesses the risk of harm to persons, programs, missions or National Security.

III. QA REQUIREMENTS:

The tasks in this WA do not require environmental measurements. Consistent with the Agency's Quality Assurance (QA) requirements, the contractor does not need to supplement the Contract Level Quality Management Plan (QMP) or prepare a Project Specific Quality Assurance project Plan (PQAPP).

IV. DETAILED TASK DESCRIPTION:

All direction under this WA will be provided as written technical direction from the WACOR, Alternate WACOR, or Task Manager (TM), as appropriate. If provided first as verbal technical direction to the contractor, it will be confirmed in writing within 5 calendar days, with a copy to the CL COR and the Contracting Officer (CO), and is subject to the limitations of the technical direction contract clause. Each initial deliverable shall be provided to the EPA WACOR in draft form for review and comment. The contractor shall incorporate WACOR/TM review comments into revisions of the drafts. All drafts and final reports shall be approved by the WACOR.

The contractor shall perform the following tasks:

Task 0: Work Plan (WP), Progress Evaluations, and Monthly Progress Reports

The contractor shall develop a WP that describes how each task will be carried out. The work plan shall include a schedule, staffing plan, level of effort (LOE), and cost estimate for each task, the contractor's key assumptions on which staffing plan and budget are based, and qualifications of proposed staff. In addition, the work plan shall include the requirement that all electronic and information technology (EIT) and all EIT deliverables be Section 508 compliant in accordance with the policies referenced at <http://www.epa.gov/accessibility/>. If a subcontractor(s) is proposed and subcontractors are outside the local metropolitan area, the contractor shall include information on plans to manage work and contract costs.

In addition, the WP shall specify that a Supplemental Project Specific Quality Assurance Project Plan (SQAPP) appending the Contract Level QMP is not required.

In each monthly progress report, the contractor shall, at the introduction to the discussion of this WA, discuss actual progress toward achieving the purpose of this work assignment, including problems encountered, issues that may need to be resolved, and anticipated timing for completing the goals of the WA. The contractor shall provide an overview of contract projects, striving to implement efficiencies in performance when complimentary requirements are issued. The contractor shall assure that duplication of effort relative to other ongoing WA under this contract is not occurring.

Deliverables: Work plan and monthly progress and financial reports.

Task 1. Designated Review Authority

The contractor shall be designated as a review authority (DRA) for research products developed by the NHSRC. In this role, the contractor shall utilize the NHSRC Security Classification Guidance (SCG) provided by the EPA WAM to assess the sensitivity of information in draft NHSRC products and provide a rating, along with a justification for any rating that entails a restriction in distribution or prohibition of release. Justifications must cite a legal requirement and be based on the SCG or other Federal classification guides issued by a cognizant authority. The types of products requiring a sensitivity review may include: articles and papers, slide presentations, speeches, abstracts, brochures, reports, proceedings, computer tools and poster displays. Topical areas shall include:

- A) Threat evaluation and infrastructure vulnerability assessment and;
- B) Chemical and biological agent research, including, but not limited to;
 - i. Simulants and synthetic toxins
 - ii. Detection technology, assessment and evaluation
 - iii. Modeling and Dispersal
 - iv. Emergency Response Actions
 - v. Decontamination
 - vi. Disposal
- C) Radiological agent research, including, but not limited to;
 - vii. Detection technology, assessment and evaluation
 - viii. Modeling and Dispersal
 - ix. Emergency Response Actions
 - x. Decontamination
 - xi. Disposal

Documents submitted for review shall be uploaded to the Security Drop Box on the NHSRC Intranet by the EPA author or PI. Upon receiving automated notification of the upload, the contractor shall access the submission and conduct the security review, issue a rating and justification as indicated on the form and electronically sign the review.

NHSRC research products will be reviewed individually to determine the level of sensitivity, resulting in a recommendation to either *designate* the product, *Unclassified*, or *For Official Use Only (FOUO)*, or to *classify* it as *NSI*, *CONFIDENTIAL* or *SECRET*.

The contractor shall review and recommend designation or classification of research products in accordance with the guidance laid down in the NHSRC SCG. These products shall include abstracts, papers, articles, project summaries, reports, slides and slideshows, brochures, one-pagers, posters, computer products. Tasks will include the following:

Evaluating every component of a product in accordance with the requirements set down in EO 13596 and recommending designation or classification of the product to the NHSRC.

- (1) In the case of a recommendation of UNCLASSIFIED, the contractor shall simply make the recommendation and sign the review form without comment.
- (2) In the case of a FOUO (For Official Use Only), designation, the contractor shall page-mark the product in accordance with accepted practice, utilizing the markings stipulated in the SCG. The contractor shall cite the relevant topic in the draft manual, and provide an assessment of why the product fulfills the topic description.
- (3) In the case of a CONFIDENTIAL or SECRET classification recommendation, the contractor

shall portion-mark the product in accordance with accepted practice, utilizing the portion-markings stipulated in the SCG. The contractor shall mark the cover of the document and the specific pages on which the information appears according to government requirements as temporary classification, pending NHSRC review and authorization. These markings shall also include the statement, "Classification Determination Pending," on the cover, title and all pages containing sensitive information.

- (4) The contractor shall deliver designation/classification recommendations and marked products to the NHSRC within 3 working days.

The DRA is a critical function as a failure to properly identify the potential National Security risk can lead to situations incurring significant civilian casualties.

In this security area, there is no room for compromise. Proper identification and assessment of risk for NHSRC research information enables NHSRC to quickly secure and control FOUO, CUI and NSI, preventing the release of such dangerous information to our adversaries. Should we fail to identify such information early in the research process, the cost incurred will be measured in lives lost, mission impacted and reputation damaged.

In sum, each individual provided by the contractor to act as a DRA must possess:

- (1) National Security Clearance at SECRET level or above,
- (2) Expertise in classifying NSI, and
- (3) Scientific knowledge to recognize the emergence of NSI in research efforts on chemical, biological and radiological attack agents.

Therefore, for each individual submitted for designation as a DRA, the contractor shall provide in the workplan a CV, resume or other record of work expertise that demonstrates all of the following:

1. Possession of a National Security Clearance at SECRET level or above
2. Expertise in the field of information classification, as either a derivative classification authority (DCA) or Original Classification Authority (OCA)
3. Expertise in threat evaluation and infrastructure vulnerability assessment
4. Expertise in these technical areas (either as a researcher or as a DCA or OCA):
 - i. Chemical and biological agents, including, but not limited to;
 - A) Chemical and biological simulants and synthetic toxins
 - B) Weaponizing agents and delivery methods
 - C) Detection technology, assessment and evaluation

- D) Modeling and Dispersal
 - E) Emergency Response Actions
 - F) Decontamination
 - G) Disposal
- ii. Radiological agent research, including, but not limited to;
- H) Weaponizing agents and delivery methods
 - I) Detection technology, assessment and evaluation
 - J) Modeling and Dispersal
 - K) Emergency Response Actions
 - L) Decontamination
 - M) Disposal

Deliverables: RASP reviews, via Security Drop Box, for each product assigned, portion-marked products (as appropriate).

Estimate Annual Number of Product Designation/Classification Reviews	
ABSTRACTS	60
PAPERS/ARTICLES	60
SLIDESHOWS	80
POSTERS	15
REPORTS/TEST PLANS	130

Task 2. NHSRC INFOSEC/OPSEC Program Support

The contractor shall support the planning, development and implementation of internal reviews, including classification guidance, self-inspections and assessments of the NHSRC INFOSEC program. These assessments will address any aspect of the INFOSEC program, as directed by the NHSRC Security Program through written technical direction. The contractor shall assist in planning sessions to assess operations and conduct walk-throughs of NHSRC sites to assist in the evaluation of security procedures. The contractor shall review classified inventory and assist in the cataloging, management, safeguarding and disposition of classified matter. As program changes are identified, the contractor shall assist in implementing those changes via documentary support.

The contractor shall support the planning, development and implementation of the NHSRC OPSEC program. The contractor shall support the development of threat assessments and documentation to establish a viable OPSEC program customized to the NHSRC operating environment. The contractor shall document and report all relevant activities in this effort.

Deliverables: Program support activities, estimated annual requirement.

Estimate Annual Number of Internal Reviews, Assessments and Inspections	
Internal Reviews	2
Assessments	1
Inspections	0

V. SCHEDULE/DELIVERABLES TABLE

Task	Product	Draft Due to WAM	Final Due to WAM
#0	Work Plan	n/a	According to Contract
#0	Progress Reports	n/a	Monthly
#1	RASP Reviews	Ongoing	95% due same day 5% due 3 days after issue
#2	NHSRC Security Assessments	Ongoing	Immediately Upon Completion

VI. REPORTING REQUIREMENTS

Monthly Progress Reports (including a progress evaluation discussion)

Financial Reports

RASP Reviews via drop box

RASP Activity Reports

VII. GREEN MEETINGS AND CONFERENCES

The contractor shall follow the provision of EPA prescription 1523.703-1, *Acquisition of environmentally preferable meeting and conference services (May 2007)*, for the use of off-site commercial facilities for an EPA event, whether the event is a meeting, conference, training session, or other purpose. Environmental preferability is defined at FAR 2.101, and shall be used when soliciting quotes or offers for meeting/conference services on behalf of the Agency.

VIII. CONFERENCES AND WORKSHOPS

The tasks under this work assignment do not require the acquisition of "off-site" facilities for conferences and meetings as defined in the IPN 12-05. AND the events associated with this work assignment are not covered by EPA Order 1900.3 and do not require EPA Form 5170.

The contractor shall immediately alert the WACOR to any anticipated event under the work assignment which may result in incurring an estimated \$20,000 or more cost, funded by EPA, specific to that event, meeting, training, etc. Those costs would include travel of both prime and consultant personnel, planning and facilitation costs, AV and rental of venue costs, etc. The EPA WACOR will then prepare for approval the internal paperwork for the event and will advise the contractor when appropriate signatures have been obtained. At that point, effort can proceed for the event. If the event is being sponsored by another EPA organization, the organization providing the planning is responsible for the approval.

Any event which meets the definition of a "conference," with total net expenditures greater than \$20,000, is required to submit EPA Electronic Form 5170 and Form 5170-A (with cost estimates/actuals). In the case the workflow system is down and CORs require emergency approval, they can submit EPA Form 5170 (PDF) (2pp, 93K) (with cost estimates) to conference@epa.gov.

IX. SOFTWARE APPLICATION AND ACCESSIBILITY (SECTION 508 REHABILITATION ACT AND AMENDMENTS)

Software Application files, if delivered to the Government, shall conform to the requirements relating to accessibility as detailed to the 1998 amendments to the Rehabilitation Act, particularly, but not limited to, § 1194.21 Software applications and operating systems and § 1194.22 Web-based intranet and internet information and applications. See: <http://www.section508.gov/>

Preferred text format:	MS Word, 8.0 or higher (Office 2007 or higher)
Preferred presentation format:	Power Point, Office 2007 or higher
Preferred graphics format:	Each graphic is an individual GIF file
Preferred portable format:	Adobe Acrobat, version 6.0

The WACOR shall identify which of delivered products will require 508 compliance.

***QUALITY ASSURANCE SURVEILLANCE PLAN
for WSD's Mission Support***

Quality Assurance Surveillance Plan

The requirements contained in this WA are considered performance-based, focusing on the Agency's desired results and outcomes. The contractor shall be responsible for determining the most effective means by which these requirements will be fulfilled. In order to fulfill the requirements, the contractor shall design innovative processes and systems that can deliver the required services in a manner that will best meet the Agency's performance objectives. This performance-based requirement represents a challenge to the contractor to develop and apply innovative and efficient approaches for achieving results and meeting or exceeding the performance objectives, measures, and standards described below. The Contractor's performance will be reflected in the positive or negative evaluation offered by the Agency in the Contractor Performance Evaluation (CPE) which is evaluated annually (per the "Contractor Performance Evaluation" clause in the contract). The WACOR shall submit a complete annual review of the areas outlined in the Quality Assurance Surveillance Plan (QASP), included in the contract, which will then be utilized by the Project Officer in preparing the overall evaluations submitted annually in response to the Contractor Performance Evaluation requirements in the contract.

EPAUnited States Environmental Protection Agency
Washington, DC 20460**Work Assignment**

Work Assignment Number

01-14

☐

Other

☐

Amendment Number:

Contract Number

EP-C-15-012

Contract Period 08/01/2015 To 07/31/2017

Base

Option Period Number 1

Title of Work Assignment/SF Site Name

Great Lakes Support

Contractor

CSRA LLC

Specify Section and paragraph of Contract SOW

2.0

Purpose:

☒

Work Assignment

☐

Work Assignment Close-Out

☐

Work Assignment Amendment

☐

Incremental Funding

☐

Work Plan Approval

Period of Performance

From 11/01/2016 To 07/31/2017

Comments:

This WA is authorized for immediate start. If the work plan is not approved within 35 days from the issue date of the WA, the contractor shall stop work.

☐

Superfund

Accounting and Appropriations Data

☒

Non-Superfund

SFO
(Max 2)☐

Note: To report additional accounting and appropriations data use EPA Form 1900-69A.

Line	DCN (Max 6)	Budget/FY (Max 4)	Appropriation Code (Max 6)	Budget Org/Code (Max 7)	Program Element (Max 9)	Object Class (Max 4)	Amount (Dollars)	(Cents)	Site/Project (Max 8)	Cost Org/Code
1										
2										
3										
4										
5										

Authorized Work Assignment Ceiling

Contract Period:

08/01/2015 To 07/31/2017

Cost/Fee:

LOE:

This Action:

Total:

Work Plan / Cost Estimate Approvals

Contractor WP Dated:

Cost/Fee

LOE:

Cumulative Approved:

Cost/Fee

LOE:

Work Assignment Manager Name Louis Blume

Branch/Mail Code:

Phone Number: 312-353-2317

FAX Number:

(Signature)

(Date)

Project Officer Name Nancy Parrotta

Branch/Mail Code:

Phone Number: 202-564-5260

FAX Number:

(Signature)

(Date)

Other Agency Official Name Erin Ridder

Branch/Mail Code:

Phone Number: 513-487-2155

FAX Number:

(Signature)

(Date)

Contracting Official Name Donna Reinhart

Branch/Mail Code:

Phone Number: 513-487-2114

FAX Number:

(Signature)

(Date)

**WORK ASSIGNMENT
PERFORMANCE WORK STATEMENT (PWS)**

Contract No. EP-C-15-02

Work Assignment: WA-01-14

WACOR: **Name:** Louis Blume
 Branch: Remedial and Restoration Branch (RRB)
 Division: N/A
 Office: Great Lakes National Program Office
 Phone: 312-353-2317
 FAX: 312-353-2018
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 Mail code: G-17J
 Street Address: 77 West Jackson Boulevard
 City, State, Zip: Chicago, IL 60604-3507

Alt WACOR: **Name:** Eric Osantowski
 Branch: Remedial and Restoration Branch (RRB), Science,
Monitoring, Evaluation and Reporting Section (SMER)

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Task Managers (if applicable):

Name: Elizabeth Murphy Barer
 Branch: Remedial and Restoration Branch (RRB), Science,
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 E-mail: murphy.elizabeth@epa.gov
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 Street Address: 77 West Jackson Boulevard
 City, State, Zip: Chicago, IL 60604-3507

Task Managers (if applicable):

Name:	Dr. Thomas Kevin O'Donnell
Branch:	Remedial and Restoration Branch (RRB), Remedial and Restoration Section (RRS2)
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FAX:	312-353-2018
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Mail code:	G-17J
Street Address:	77 West Jackson Boulevard
City, State, Zip:	Chicago, IL 60604-3507

Period of Performance: WA award date through July 31, 2017

Title: Support to EPA's Great Lakes National Program Office

PWS Sections: Section 2 pages 6-15, and 19-24, and pages 28 to 34

Louis Blume serves as the WACOR and Dr. Eric Osantowski serves as the Alternate WACOR. There are 3 Task Managers including 1) Elizabeth Murphy Barer for the Great Lakes Fish Monitoring and Surveillance Program, 2) Dr. Eric Osantowski for the Biology and Limnology Programs, and 4) Dr. Thomas Kevin O'Donnell for the Coastal Wetlands Monitoring Program.

I. PURPOSE:

The purpose of this work assignment is to provide support to the U.S. Environmental Protection Agency's (EPA) Great Lakes National Program Office (GLNPO) in its efforts to: develop and implement GLNPO's Quality program; design, implement, interpret and report on environmental monitoring programs and special studies; and support its mission to lead and coordinate United States efforts to protect and restore the Great Lakes. The contractor shall provide quality management, scientific, data management, and technical support to review, plan, document, conduct, and report on environmental monitoring projects and other studies administered by GLNPO.

The contractor shall provide quality management, scientific, data management, modeling, and technical support to review, plan, document, conduct, interpret, track, and report on environmental monitoring projects and other studies for EPA review and decision.

The Contractor is tasked with supporting the design and implementation of environmental monitoring projects and other studies from the planning to the reporting stages. Contractor activities provide support to a variety of programs at GLNPO including the Great Lakes Fish Monitoring and Surveillance Program, the Water Quality Survey of the Great Lakes Limnology

and Biology programs, the Coastal Wetland Monitoring Program, and the Information Management Program. Specifically, the contractor shall:

- Support implementation of GLNPO's Quality Management program including developing and implementing tools to inventory, track, assess, and report on project planning and quality documentation for GLNPO projects and reviewing and assessing the quality of environmental monitoring data
- Develop, document, and maintain data management systems and databases including metadata management, final database management, (air, water, sediment, multiple biota types, and other matrices), linkages through software and programmed systems, and final use and integration with mathematical models and outputs
- Research, evaluate, develop, and implement sampling and analysis procedures to support environmental monitoring projects
- Conduct statistical and geostatistical data analysis and interpretation and develop and apply environmental models including applying GIS and visualization tools to describe, evaluate, interpret, and present environmental conditions and information
- Develop, maintain, evaluate, refine and apply scientific models to assess, describe, and evaluate ecosystems while accounting for the sources, sinks, transport, fate, and effects of stressors, based upon the principle of conservation of mass, energy, and momentum
- Support model code development and maintenance, debugging, compiling, database integration, systems integration and automation, model calibration, and integration with visualization and graphic presentation
- Calculate environmental metrics, such as total maximum daily loads, that facilitate assessment, evaluation, and interpretation of environmental data and environmental monitoring scenarios
- Develop, code, test, validate, archive and document revised and new models
- Use ecosystem scale modeling approaches to provide an integrated and synthetic picture of the system to facilitate establishment of regulatory and remedial priorities with both local and lake-wide perspectives
- Develop technical, quality assurance and scientific reports, web content, presentations, and outreach materials on environmental monitoring projects, programs, and other studies

- Provide scientific, technical, analytical, and administrative support for programmatic projects and initiatives; develop and implement tools for tracking, documenting, archiving, and presenting program information
- Coordinate, support, attend and present at meetings, workgroups, and conferences on environmental monitoring projects, modeling efforts, statistical analyses, quality management, and other aspects of environmental studies

All of the above general areas of support are to provide technical assistance to the EPA in their decision making process. The contractor shall further support EPA through the specific tasks described in detail under Section IV of this work assignment.

This work assignment provides quality management, scientific, data management, modeling, and technical support to review, plan, document, conduct, interpret, track, and report on environmental monitoring projects and other studies. The Great Lakes - Superior, Michigan, Huron, Erie, and Ontario - form the largest surface freshwater system on the Earth. More than 30 million people live in the Great Lakes basin, and the daily activities of these people, from the water consumed to the waste returned, directly affects the Great Lakes environment. This work assignment supports GLNPO activities in protecting and restoring the nation's drinking water, in being informed, coordinated and prepared to prevent, detect, respond to and recover from attacks and natural disasters. This work assignment also supports international commitments such as the bi-national waterway strategies with Canada.

This work assignment supports the mission of the Water Security Division (WSD) as described in the Water Security Strategy framework, which relates resources, activities, outputs, audience, short- and long- term outcomes to the WSD pillars of Prevention, Detection, Response, and Recovery. Additionally, this work assignment contributes to the commitments made in EPA's *Strategic Plan: 2016 to 2020* and EPA's *Homeland Security Strategy (2004)*. Under EPA's *Strategic Plan*, reference is made to Goal 2 (Clean and Safe Water), Objective 2.1 (Protecting Human Health), Sub-objective 2.1.1 (Water Safe to Drink), and to the Cross-Goal on homeland security. Under EPA's *Homeland Security Strategy*, reference is made to Objective 1 (Critical Infrastructure Protection).

In support of these requirements, this contract supports the nation's drinking and wastewater infrastructure, collectively known as the Water Sector, in being informed, coordinated, and prepared to prevent, detect, respond to, and recover from terrorist attack and other intentional acts, natural disasters, and other hazards (referred to as the "all hazards" approach), which may also occur, including the needs and challenges posed by natural disasters, catastrophic events, adaptation and impacts of climate change, floods, earthquakes, pandemic illness, and any other events which impact the safety and availability of our water supply.

In pursuit of these efforts, the contractor may be tasked with preparing a correlation summary comparing the results under this work assignment to the components of the Water Security Strategy framework.

II. BACKGROUND:

The GLNPO was created in 1978 to fulfill the United States' obligation under the Great Lakes Water Quality Agreement with Canada. Since inception, additional responsibilities for GLNPO have been defined in Section 118 of the Clean Water Act, Section 112 of the Clean Air Act Amendments, and the Great Lakes Critical Programs Act of 1990. Within EPA, GLNPO is responsible for monitoring the condition of the waters of the Great Lakes and working to protect and restore the integrity of the nation's Great Lakes water resources, which serve as critical source waters for drinking water systems, and are a unique and symbolic national treasure that cross our national borders. GLNPO is a geographically-focused office, whose mission is to lead and coordinate United States efforts to protect and restore the Great Lakes. GLNPO's responsibilities include:

- Overseeing fulfillment of EPA's international commitments under the U.S.-Canada Great Lakes Water Quality Agreement
- Monitoring lake ecosystem indicators
- Managing and providing public access to Great Lakes data
- Helping communities address contaminated sediments in their harbors
- Supporting local protection and restoration of important habitats
- Promoting pollution prevention through activities and projects such as the U.S.-Canada Great Lakes Bi-national Toxics Strategy
- Providing assistance for community-based Remedial Action Plans for Areas of Concern and for Lake-wide Management Plans

GLNPO administers ongoing monitoring programs, conducts special studies to address new impacts of concern, implements sediment assessment and remediation activities, and is involved in several large scale cooperative studies. GLNPO assists Great Lakes partners (including federal, state, tribal, local, educational, and industry organizations) in these areas through technical assistance and coordination, as well as grants, interagency agreements, and contracts.

GLNPO has primary responsibility within the U.S. for conducting surveillance monitoring of the offshore waters of the Great Lakes. This monitoring is intended to fulfill provisions of the Great Lakes Water Quality Agreement (International Joint Commission, 1978) calling for periodic monitoring of the lakes to: 1) assess compliance with jurisdictional control requirements; 2) provide information on non-achievement of agreed-upon water quality objectives; 3) evaluate water quality trends over time; and 4) identify emerging problems in the Great Lakes Basin Ecosystem. GLNPO's base monitoring program involves semi-annual Water Quality Surveys of all five lakes to meet the surveillance monitoring requirements. Each summer GLNPO also conducts an intensive survey of dissolve oxygen (DO) concentrations in Lake Erie. GLNPO also oversees the Great Lakes Fish Monitoring Program to measure the contaminant levels of

various organic substances in lake trout in the Great Lakes ecosystem. GLNPO has ongoing monitoring programs, conducts special studies to address new impacts of concern, and is involved in several large scale cooperative studies including a lake-wide pollutant modeling study, the Lake Michigan Mass Balance Study.

III. QA REQUIREMENTS:

Task(s) 1, 3, 4, 5, and 6 in this work assignment require quality assurance (QA). Collection, use and analysis of data will be identical to the procedures described in the Project-Specific Quality Assurance Project Plan (PQAPP) completed under task(s) 1, 3, 4, 5, and 6 of WA 00-14, consistent with the Agency's Quality Assurance (QA) requirements, appending the Contract Quality Assurance Project Plan (QAPP). The project specific QA requirements must be addressed in the monthly progress reports as specified under Task 0, below.

IV. DETAILED TASK DESCRIPTION:

All direction under this WA will be provided as written technical direction from the WACOR, Alternate WACOR, or Task Manager (TM), as appropriate. If provided first as verbal technical direction to the contractor, it will be confirmed in writing within 5 calendar days, with a copy to the Contract Level Contracting Officer's Representative (CL COR) and the Contracting Officer (CO), and is subject to the limitations of the technical direction contract clause. Each initial deliverable shall be provided to the EPA WACOR and EPA CL COR in draft form for review and comment. The contractor shall incorporate WACOR/TM review comments into revisions of the drafts. All drafts and final reports shall be approved by the WACOR.

The contractor shall perform the following tasks:

Task 0: Work Plan, Progress evaluations, and Monthly Progress Reports

The contractor shall develop a work plan that describes how each task will be carried out. The work plan shall include a schedule, staffing plan, level of effort (LOE), and cost estimate for each task, the contractor's key assumptions on which staffing plan and budget are based, and qualifications of proposed staff. If a subcontractor(s) is proposed and subcontractors are outside the metropolitan DC area, the contractor shall include information on plans to manage work and contract costs. The work plan shall also provide an analysis of the existing and projected constraints, and the feasibility of accomplishing the project's purpose.

In addition, the contractor shall prepare a project specific quality assurance plan (PQAPP) (noted above) and ensure the quality of secondary data used to complete these tasks. Work on these tasks cannot proceed until the contractor receives notification of the new PQAPP approval from the CL COR via e-mail. This task also includes monthly progress and financial reports. The monthly progress report shall indicate, in a separate QA section, whether significant QA issues have been identified and how they are being resolved. Monthly financial reports must include a table with the invoice LOE and costs broken out by the tasks in this WA.

In addition, in each monthly progress report, the contractor shall, at the introduction to the discussion of this WA, discuss actual progress toward achieving the purpose of this WA, , including problems encountered, issues that may need to be resolved, and anticipated timing for completing the goals of the WA. The contractor shall provide an overview of contract projects, striving to implement efficiencies in performance when complimentary requirements are issued. The contractor shall assure that duplication of effort relative to other ongoing work assignments under this contract is not occurring

Task 0 Deliverables: Work plan, revised versions of PQAPPs, monthly progress and financial reports.

Task 1: Scientific, Statistical, Visualization, and Quality Assurance Support to EPA's Great Lakes National Program Office - Quality Management Support

The contractor shall support implementation of GLNPO's Quality Management program including developing and implementing tools to inventory, track, assess, and report on project planning and quality documentation for GLNPO projects as indicated by written technical direction provided by the Task Manager. The contractor shall assist EPA with reviewing, evaluating, and implementing EPA Quality Policy directives, guidance documents and other supporting materials. The contractor shall provide quality management support to the Great Lakes Fish Monitoring and Surveillance Program, the Water Quality Survey of the Great Lakes, and the Great Lakes Legacy Act Program, as well as other environmental monitoring programs and special studies. The contractor shall provide quality support to: plan, document, conduct, evaluate, and report on environmental monitoring programs. Specific activities include:

- Conduct literature searches in support of the design of monitoring programs, interpretation of study data, and development of QA assessment parameters including data quality objectives
- Review and assess EPA Quality Policy initiatives, implementation and guidance materials
- Assist in the development and revision of quality system documentation
- Develop and implement procedures and checklists to review quality system documentation
- Develop and implement tools to inventory, track, assess, and report on project planning and quality documentation for GLNPO projects
- Provide standard reports on quality system documentation status for all GLNPO funded projects
- Evaluate sampling, analytical, and geospatial data reporting standards, data reporting forms, and supporting documentation
- Conduct data verification, data quality assessments, and data usability assessments and provide reports presenting the results of the reviews
- Develop, evaluate and implement statistical analyses in support of data quality

- assessments; create and maintain all supporting statistical programs
- Prepare QA reports for environmental monitoring and other study data
- Provide technical support for conducting on-site field or laboratory audits of EPA field contractors and contractor grantee laboratories and the laboratory aboard the *Research Vessel Lake Guardian*
- Provide technical and quality management support to review reports, journal articles, and related documents
- Provide general technical and quality assurance support to plan, document, and implement monitoring programs and other special studies

As directed by the EPA WACOR, the contractor shall assist EPA in conducting or coordinating peer reviews of program methodology, strategies, methods, and protocols or other products related to this work assignment task. When coordinating reviews of study plans, protocols, methods, or third-party data (e.g., journals, grey literature, non-EPA databases, etc.), the contractor will focus on determining the applicability of plans to specific EPA needs and shall make any appropriate recommendations to the EPA WACOR concerning their use in present form or with suggested modifications. The contractor will ensure that in-house reviews are performed by qualified staff, and will contact the author(s) of the subject materials to obtain additional information or clarifications about the material when such information is necessary to render a complete review.

The contractor shall provide or coordinate independent review of program methodology, strategies, methods, and protocols or other products related to this work assignment task as directed by the EPA WACOR. The contractor shall ensure that these independent reviews are conducted by technically qualified, independent reviewers in accordance with EPA's policy on peer review as outlined in EPA's Science Policy Council Handbook on Peer Review. In this effort, the contractor may identify and consult with experts in the specific area of interest to EPA.

Task 1 Deliverables: Quality system documentation reviews in standardized formats, standard reports on quality system documentation status for all GLNPO funded projects, monthly status reports on quality system documentation, data quality assessment reports in standardized formats, audit checklists and other materials in support of field and laboratory audits, reports on field and laboratory audits, project-specific quality assurance reports, and technical support for conducting on-site field and laboratory audits. We estimate approximately 10-20 project level quality plan reviews along with 7-10 data package reviews and one on-site audit of the GLFMSP grantee laboratory. Specific details on expectations of reviews is defined above and in the specific work assignment quality documents (previously approved).

Task 2: Information Management, Assurance and Database Development

The contractor shall develop, document, and maintain databases and automated tools to efficiently, securely, and systematically gather, store, and manipulate a variety of technical, environmental, statistical, scientific, quality, and laboratory information related to Great Lakes protection, characterization, evaluation, security and risk assessment, and remedial activities.

The contractor also shall assist EPA in creating, planning, and implementing data management systems and databases based on detailed evaluation of existing systems, including expanding of existing systems where appropriate. Please consider use of Agile Development approaches or methodology wherever applicable consistent with EPA's Office of Environmental Information (OEI) directives.

Specific activities include:

- Develop, document, and implement sampling, analytical, and geospatial data reporting standards, data reporting forms, and supporting documentation
- Create, revise, document, and maintain databases of Great Lakes biological, chemical, geospatial, sediment, physical monitoring data, statistical, scientific, laboratory, security and other information (e.g., Triaxus, fish, zooplankton, phytoplankton, and benthos data)
- Develop and maintain secure web interfaces, communication processes, and other systems including secure database and secure sharing frameworks.
- Develop and implement standardized evaluation of data submittals against requirements of study databases and provide standard reports on results of the evaluation
- Convert hardcopy and electronic field and analytical data into complete electronic files compliant with specific data standards including the Great Lakes Environmental Database and the Great Lakes Sediment Database (GLSED)
- Update databases with incoming data and revised data submissions and track updates
- Assist with input, maintenance, retrieval, analysis, reporting, and reformatting/integration and normalization of environmental data from EPA databases.
- Provide information assurance and security, compilation and coordination support to EPA systems and databases, including guidance for handling and sharing of information, vulnerability assessment compilation and maintenance efforts.
- Provide technical support to evaluate, deploy, test, back-up, configure, monitor, and maintain information management systems, networks, and technologies
- Support information technology initiatives including information protection efforts
- Develop and implement automated data verification systems that will provide reports to assist in conducting data verification and validation
- Develop and implement tools to inventory, track, assess, and report on project planning, project implementation, quality documentation, and project information and status, for GLNPO projects
- Develop automated reporting procedures to produce standardized reports on quality system documentation status, and other project level and program level data, contained in study databases
- Test the functionality and information security of new or modified databases, networks or information management systems
- Provide recommendations regarding database development, information assurance and security, and data reporting

- Provide technical support regarding database development needs for Great Lakes Initiatives
- Create and maintain secure, web enabled systems that provide secure interactive access for project leads and other interested parties to query data as well as preparing supporting documentation such as systems requirements documents, user guides and online help modules.

Task 2a Deliverables: Maintenance and provision of environmental databases, database documentation, and monthly status reports on quality system documentation, monthly status reports on status of data processing and uploads, guidance documentation of data reporting standards, processing submitted data into EPA standard formats, such as the Great Lakes Environmental Database Standard, and standard reports on data submission evaluation. Support refinements and customization of the queries for existing data management systems, including the SeaBird Data Management system, the nearshore database, and the zooplankton database. In support of Information Assurance, apply the Risk Management Framework (RMF) of security as required by the EPA, providing weekly and monthly reports to show Standard Configuration Documents (SCDs) are applied to all GLNPO NET hardware and VMware. Provide Action and Milestone (POA&M) reports, weekly security status reports, weekly trend analysis on the vulnerability scanning (to prove scanning and mitigation efforts continue to mitigate new vulnerabilities found), and all EPA required information in the Xacta database for Authority to Operate (ATO) support. As new information technology initiatives become available, advise, document and apply when possible, the new information protection efforts in support of the GLNPO NET RMF and ATO. All database and system level technical issues should be reviewed by GLNPO's Information Technology and Contracts Management section and the Region 5 Information Management Branch to assure conformance with GLNPO and EPA requirements.

Task 2b Deliverables: Assist the GLNPO Great Lakes Fish Monitoring and Surveillance Program (GLFMSP) with Database Query's that allows easy access by GLNPO and GLRI associated scientists and maintains a historical version controlled record for eventual public dissemination. All database and system level technical issues should be reviewed by GLNPO's Information Management and contracts section and the Region 5 Information Management Branch to assure conformance with GLNPO and EPA requirements.

Task 2c Deliverables: Provide assistance to GLNPO on uploading GLLA sediment assessment, Biology program benthic, phytoplankton, and zooplankton datasets so they are publicly available through agency CDX and WQX connections; support integration of EPA's Geo-platform with web-enabled GLSED; and integrate GLSED and QA Track to provide functional document exchange between the systems for Legacy Act studies (Use case 1 proof of concept).

Task 2d Deliverables: Assist the GLNPO Open Lake Limnology Monitoring Program with Database Query's that allows easy access by GLNPO and GLRI associated scientists and maintains a historical version controlled record for eventual public dissemination. All database and system level technical issues should be reviewed by GLNPO's IM/IT and Contracts Section

to assure conformance with GLNPO and EPA requirements. This task will also require continued development of a data verification process in conjunction with GLNPO monitoring section scientists that assures all data generated conforms to the internal quality control requirements as specified in the Version Controlled FY 2013-2016 Sampling and Analytical Plans. Once a data set is verified, version controlled and tracked, the data validation process should commence utilizing the existing approaches as specified in the FY 2013-2016 Sampling and Analytical Plans and any new routines as specified by the task lead. Once a validated data set is completed and documented with associated verification and validation flags a summary data report should be provided with a narrative on how the associated flags should be considered for future use by other parties. A discrepancy record should be maintained for all corrections made to each verified and validated data set along with appropriate version control. Once the data set is validated and verified and appropriately documented it should be provided to the task WACOR the GLNPO technical lead and the GLNPO IM/IT and Contracts Section for securely sharing internally and externally. We are assuming roughly 10 various data set deliverables will be assessed as part of this work.

Task 3: Sampling and Analytical Support

The contractor shall provide sampling, analytical, and technical support to plan, document, and implement environmental monitoring projects and other special studies. This support will include assistance and guidance in designing monitoring programs and studies to characterize the frequency and occurrence of chemical and biological contaminants. As necessary, the contractor also will conduct evaluations of the scientific literature and consult with subject experts to identify candidate or alternate design strategies and assist EPA in developing a comprehensive understanding and definition of sampling and analysis goals (such as data quality objectives). The contractor will assist EPA in the development of statistically based sampling designs to accomplish these goals. The contractor also will assist EPA in coordinating and implementing sampling efforts. This support will include the developing, assembling, and distributing sampling kits and providing technical support to field sampling teams and laboratory personnel as directed by the EPA WACOR or designated Task Manager. The contractor will provide such support to meet the specific programmatic needs of the Great Lakes program, including coordinating laboratory analysis with laboratories operating under contracts or grants with either EPA or with state partners in the Great Lakes basin. This may include support for studies on water, fish, and sediments from the open lakes or tributaries, bays, lagoons, point sources, atmospheric and other vectors that flow into the lakes. In performing these activities, the contractor shall subcontract with qualified, experienced laboratories in accordance with all applicable EPA and Federal Acquisition Regulations, if necessary.

Provide support to GLNPO for program coordination, monitoring, evaluation, and execution. Specific activities include:

- Research, evaluate, develop, and implement sampling and analysis procedures to support environmental monitoring projects including all aspects of the Water Quality

Survey and nearshore characterization using TRIAXUS towed undulator and associated instrumentation

- Develop, evaluate, and implement data quality objectives, statistical sampling designs, and systematic planning for data gathering and monitoring studies
- Provide general program coordination support such as contacting participants, maintaining communications with participants, resolving issues or discrepancies, etc.
- Coordinate sampling schedule with field sampling teams to ensure teams receive proper sampling kits and materials prior to field collection efforts
- Develop sampling kits for GLFMSP and other studies
- Coordinate laboratory analysis with laboratories operating under contracts or grants with either EPA or with state partners in the Great Lakes Basin
- Procure laboratory supplies
- Track supplies shipped to participant laboratories
- Coordinate with all parties and shipping companies, such as Federal Express, to ensure that proper shipping protocols are followed to avoid delays and holding time issues with samples
- Review preliminary data to identify any issues
- Address any issues that were observed during preliminary analyses
- Develop detailed study instructions and updates
- Track shipments to laboratories
- Provide ongoing daily technical support to laboratories
- Provide logistical support to participating laboratories
- Troubleshoot problems that arise
- Follow-up with laboratories to request additional information or clarify any notes or study results
- Data review
- Review primary elements to verify calculation accuracy
- Validate primary data against method- and study-specific requirements
- Contact laboratories to resolve any data issues (e.g., missing information, discuss QC results)
- Assess individual laboratory results
- Perform data analysis and assess performance against data quality objectives
- Provide storage space for sampling kit materials and supplies and freezer space for archived GLFMSP samples, GLLA samples, and other study samples, through the length of the contract
- Provide fish homogenization support and other sample preparation support to GLFMSP and other studies
- Develop and maintain comprehensive sampling and analytical manuals containing current SOPs
- Create and maintain program documentation, tracking forms, field recording forms for GLLA, WQS, GLFMSP and other studies
- Provide support to the *Research Vessel Mudpuppy* including: Observing sampling activities, providing Global Positioning System (GPS) software training, and updating SOPs

Task 3 Deliverables: Development, assembly and distribution of sampling kits; technical support to field teams for sampling and analysis; reports documenting research and evaluation of sampling and analytical procedures; procurement and oversight of sampling processing, archiving, and analysis laboratories; sampling and analytical manuals in hard-copy and electronic format suitable for upload to GLNPO's website; quality system documentation including documentation of data quality objectives and statistical sampling designs.

Task 4: Statistical Support and Data Interpretation

The contractor shall provide statistical support in planning, documenting, implementing, assessing, and reporting on environmental monitoring projects, special studies, and other strategies to implement GLNPO's programmatic objectives. The contractor shall conduct statistical and geostatistical data analysis and interpretation, including applying GIS and visualization tools, to describe, evaluate, and present environmental conditions. The contractor shall: develop, evaluate, document, and apply environmental models to predict environmental conditions based on available data. Specific activities include:

- Assist with the development of data quality objectives and implementation of systematic planning for studies collecting or using environmental data, including assisting in development of statistical sampling designs and calculating statistical power and confidence associated with possible design scenarios
- Write and maintain automated programs for conducting statistical analysis of study data
- Provide summary and graphical representations of statistical data assessments for use in developing reports
- Design and conduct modeling and statistical analyses, such as parametric analyses (including linear and nonlinear regression analysis, ANOVA, two-sample and paired
- T-tests, non-parametric analyses (including Sen regression analysis for detection and estimation of trends, Spearman rank correlations, Wilcoxon sign-rank and rank sum tests), and other statistical analyses and data interpretation strategies to support implementation and reporting of studies
- Develop, evaluate, and utilize algorithms to process satellite imagery and other remote sensing data for water quality and other environmental parameters
- Research, develop, and implement mathematical models and analyses to develop and evaluate temporal and spatial analysis of environmental parameters
- Evaluate available data for use in data interpretation and analysis, addressing data quality and scientific issues
- Research, identify, recommend, and implement appropriate statistical analyses to answer specific study questions
- Conduct geo-statistical analysis of environmental data including development, implementation, and evaluation of geo-statistical modeling efforts
- Provide summary and graphical representations of geo-statistical modeling results
- Present results of statistical analyses, modeling efforts, and other data interpretations

strategies to EPA and project stakeholders

- Respond to technical questions regarding technical approaches, data interpretation strategies, and results
- Write and maintain programs for conducting statistical and geo-statistical analysis of project and QC data
- Assist EPA in interpreting and reporting environmental information using GIS
- Provide guidance on the statistical impacts of various aspects of environmental studies, including the effect of analytical precision, sensitivity and bias on study data and the ability to meet study goals
- Provide scientific, statistical, geo-statistical, and quality management support to evaluate, analyze, interpret and report on environmental data

When performing these activities, the contractor shall clearly specify the methods, procedures, assumptions, relevant citations, data sources, and data that support the results and any recommendations offered. Where applicable, the contractor also will document alternative methods, procedures, and assumptions that were considered in the statistical analysis.

Task 4 Deliverables: Data summaries, reports, and graphical illustrations detailing results of scientific, modeling, statistical, and geo-statistical analysis of environmental data; modeling and analysis of total phosphorus and other parameters including evaluation of statistical power to evaluate reductions in total phosphorus loading in different parts of the lakes reports detailing the technical approach, methods, procedures, assumptions, relevant citations, data sources, data and results of statistical and geo-statistical analysis of environmental data; maps of sampling stations and monitoring data.

Task 5: Development of Technical, QA, and Program Reports

The contractor shall assist EPA in developing comprehensive technical, quality assurance, and scientific reports on results of studies, strategies, and monitoring programs administered by GLNPO. This support shall primarily consist of collecting, compiling, analyzing and presenting data and information that EPA may use in decision making processes. The contractor shall provide all documents for WACOR review and approval, prior to production of the final version. Specific activities include:

- Review, compile, and summarize historical and current information associated with environmental monitoring, environmental remediation, environmental modeling, and other projects
- Develop graphics, maps, and illustrations, presenting data, project information, and results of data interpretation, analysis, and modeling
- Develop draft reports (e.g., limnology report) documenting project details and objectives, results, interpretation of data, and conclusions for EPA review
- Integrate comments received from reviewers into revised versions as directed by EPA
- Produce final hardcopy reports and electronic versions of final reports suitable for distribution on EPA websites

- Develop presentations detailing project information and data, graphical illustrations and maps of project information and data, modeling results, program information, and other information associated with GLNPO initiatives
- Develop materials presenting data and other information on Great Lakes initiatives for distribution and presentation on EPA websites

Task 5 Deliverables: Subsequent versions of the Water Quality Survey Monitoring report revised to incorporate feedback from EPA on the draft.

Task 6: Program Management Support

As directed by the EPA WACOR, the contractor shall assist EPA in coordinating and administering GLNPO programs. The contractor shall provide scientific, technical, analytical, and administrative support for programmatic projects and initiatives. Specific activities include:

- Develop and implement tools for tracking, documenting, archiving, and presenting program information
- Compile and analyze programmatic information in support of development of reports, web content, outreach materials, briefings and presentations
- Develop for EPA review, and implement approaches and procedures, based on EPA standard procedures and guidelines as appropriate, to compile, document, track, archive and record programmatic information

Task 6 Deliverables: Summaries and reports presenting program information. Assume 3-6 programmatic reports.

Task 7: Meeting and Outreach Support

The contractor shall coordinate and support meetings, workgroups, and conferences on environmental monitoring projects and other studies including providing technical support to develop guidance documents, studies, reports, and other materials related to the activities performed under this contract. The contractor shall prepare all documents for WACOR review and approval, prior to production of the final version.

Specific activities include:

- Develop technical documents (e.g., technical reports, data summaries, issue papers, briefing materials) to support EPA's analysis of technical issues and options related GLNPO programs
- Develop technical documents or outreach materials (e.g., fact sheets, brochures, presentations, guidance documents, training modules) to assist EPA Regions, States, and collaborators in implementing GLNPO programs
- Develop briefing materials and status reports related to GLNPO projects and support provided under this contract
- Assist EPA in disseminating information to stakeholders in the Great Lakes region

- Track communications and record interactions
- If directed by the EPA WACOR, identify and evaluate meeting locations; finalize meeting space logistics; finalize contract for meeting space; coordinate with meeting space personnel
- Recruit subject matter experts and set-up travel arrangements, consistent with EPA travel requirements
- Develop and facilitate registration materials
- Provide meeting facilitation, develop evaluation tools, take minutes, and distribute follow up materials
- If directed by the EPA WACOR, attending, presenting materials, or supporting EPA activities at technical workshops, conferences, symposiums, training sessions, or public meetings.

Task 7 Deliverables: Presentations, fact sheets, meeting agendas, meeting registration websites, and meeting minutes.

The contractor shall assume one trip of one staff each for two days to Syracuse, NY; one trip of one staff each for three days to Ithaca, NY; one trip of one person for two days to Alpena, MI; one trip for two people for six days to New Orleans; one trip of one person for two days to Potsdam, NY; one trip of one staff for three days to Buffalo, NY; one trip of four staff for four days to Detroit, Michigan; one trip of one staff for five days to Orlando, Florida; one trip of two people for four days to New Orleans, LA; and four trips of one staff for three days to Chicago, IL for estimating purposes.

V. SCHEDULE/DELIVERABLES

Task	Deliverable	Quantity	Due Date
0	Work plan		Per contract requirements
0	Monthly progress and financial reports		Per contract requirements
1	Data quality assessments. Includes narrative detailing results of assessment.		30 days after receipt of a complete data set
1	Quality documentation reviews in standardized formats		Within 10 business days of receipt of a full set of quality documentation
1	Technical support and materials for conducting on-site field and laboratory audits of the Great Lakes Fish Monitoring and Surveillance Program (GLFMSP) analytical laboratory grantee and		To be established by written technical direction
2a	Processing and upload of project data into the SeaBird data System		To be established by written technical direction
2a	Development and implementation of specific program queries for existing systems including the SeaBird system, the zooplankton database, and the Nearshore system		To be established by written technical Direction
2a	Provide support to Microsoft SharePoint central administration		To be established by written technical direction

2a	Refine and implement approach for managing and processing SeaBird data files		To be established by written technical direction
2a	Action and Milestone (POA&M) reports, trend analysis on the vulnerability scanning, and all required information in the Xacta database		Weekly or by written technical direction
2b	Development and implementation of specific program queries for the GLFMSP database		To be established by written technical direction
2c	Processing and upload of GLFMSP, GLLA, and biological project data into the Great Lakes Environmental Database		To be established by written technical direction
2c	Monthly status reports on upload of data to the Great Lakes Environmental Database		The second Tuesday of each month
2c	Support integration of EPA's Geo-platform with web-enabled GLSED and other systems		To be established by written technical direction
2c	Support enhancements such as customized queries and forms for the database to house sediment data for Michigan Department of Environmental Quality		To be established by written technical direction
2c	Integrate GLSED and QA Track to provide functional document exchange between the systems for Legacy Act studies		To be established by written technical direction
2d	Data review narratives		Within 30 days of receipt of a complete data Submission
3	Development of sampling designs		To be established by written technical Direction
3	Evaluation of sampling designs		To be established by written technical Direction
3	Development, assembly and distribution of sampling kits for the GLFMSP		To be established by written technical direction
3	Procurement and oversight of homogenization laboratory for the GLFMSP		To be established by written technical direction
4	Data analysis and modeling results for monitoring and assessment studies presented in data summaries and visualizations, technical reports, and maps		To be established by written technical direction
4	Conduct statistical analysis of biological and limnological data in support of annual reports		To be established by written technical direction
5	Technical, QA, and Program Management Reports		To be established by written technical direction
6	Program Management Support		To be established by written technical direction
7	Provide technical support for webinars and teleconference meetings		To be established by written technical direction

7	Presentations and meeting minutes to support meeting and	14 days after provision of technical direction
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VI. REPORTING REQUIREMENTS

Monthly Progress Reports (including a progress evaluation discussion)
Financial Reports
Project Specific PQAPP (if applicable)

VII. GREEN MEETINGS AND CONFERENCES

The contractor shall follow the provision of EPA prescription 1523.703-1, *Acquisition of environmentally preferable meeting and conference services (May 2007)*, for the use of off-site commercial facilities for an EPA event, whether the event is a meeting, conference, training session, or other purpose. Environmental preferability is defined at FAR 2.101, and shall be used when soliciting quotes or offers for meeting/conference services on behalf of the Agency.

VIII. CONFERENCES AND WORKSHOPS

The contractor shall immediately alert the WACOR to any anticipated event under the work assignment which may result in incurring an estimated \$20,000 or more cost, funded by EPA, specific to that event, meeting, training, etc. Those costs would include travel of both prime and consultant personnel, planning and facilitation costs, AV and rental of venue costs, etc. The EPA WACOR will then prepare for approval the internal paperwork for the event and will advise the contractor when appropriate signatures have been obtained. At that point, effort can proceed for the event. If the event is being sponsored by another EPA organization, the organization providing the planning is responsible for the approval.

Any event which meets the definition of a "conference," with total net expenditures greater than \$10,000, is required to submit EPA Electronic Form 5170 and Form 5170-A (with cost estimates/actuals). In the case the workflow system is down and CORs require emergency approval, they can submit EPA Form 5170 (PDF) (2pp, 93K) (with cost estimates) to conference@epa.gov. Currently there is no plans for tasking conference support for this option period.

IX. SOFTWARE APPLICATION AND ACCESSIBILITY (SECTION 508 REHABILITATION ACT AND AMENDMENTS)

Software Application files, if delivered to the Government, shall conform to the requirements relating to accessibility as detailed to the 1998 amendments to the Rehabilitation Act, particularly, but not limited to, § 1194.21 Software applications and operating systems and §

1194.22 Web-based intranet and internet information and applications. See:
<http://www.section508.gov/>

Preferred text format:	MS Word, 8.0 or higher (Office 2007 or higher)
Preferred presentation format:	Power Point, Office 2007 or higher
Preferred graphics format:	Each graphic is an individual GIF file
Preferred portable format:	Adobe Acrobat, version 6.0 or higher

The WACOR shall identify which of delivered products will require 508 compliance.

QUALITY ASSURANCE SURVEILLANCE PLAN
For the Water Security Division's
Technical, Analytical, and Regulatory Mission Support
Performance Work Statement

Quality Assurance Surveillance Plan

The requirements contained in this WA are considered performance-based, focusing on the Agency's desired results and outcomes. The contractor shall be responsible for determining the most effective means by which these requirements will be fulfilled. In order to fulfill the requirements, the contractor shall design innovative processes and systems that can deliver the required services in a manner that will best meet the Agency's performance objectives. This performance-based requirement represents a challenge to the contractor to develop and apply innovative and efficient approaches for achieving results and meeting or exceeding the performance objectives, measures, and standards described below. The Contractor's performance will be reflected in the positive or negative evaluation offered by the Agency in the Contractor Performance Evaluation (CPE) which is evaluated annually (per the "Contractor Performance Evaluation" clause in the contract). The WACOR shall submit a complete annual review of the areas outlined in the Quality Assurance Surveillance Plan (QASP), included in the contract, which will then be utilized by the Project Officer in preparing the overall evaluations submitted annually in response to the Contractor Performance Evaluation requirements in the contract.

EPAUnited States Environmental Protection Agency
Washington, DC 20460**Work Assignment**

Work Assignment Number

01-15

☐

Other

☐

Amendment Number:

Contract Number
EP-C-15-012

Contract Period 08/01/2015 To 07/31/2017

Title of Work Assignment/SF Site Name

Organics Materials Management

Contractor
CSRA LLC

Specify Section and paragraph of Contract SOW

2.2, 2.10, 2.16

Purpose:

☒

Work Assignment

☐

Work Assignment Close-Out

☐

Work Assignment Amendment

☐

Incremental Funding

☐

Work Plan Approval

Period of Performance

From 08/01/2016 To 07/31/2017

Comments:

☐

Superfund

Accounting and Appropriations Data

☒

Non-Superfund

SFO
(Max 2)☐

Note: To report additional accounting and appropriations data use EPA Form 1900-69A.

Line	DCN (Max 6)	Budget/FY (Max 4)	Appropriation Code (Max 6)	Budget Org/Code (Max 7)	Program Element (Max 9)	Object Class (Max 4)	Amount (Dollars)	(Cents)	Site/Project (Max 8)	Cost Org/Code
1										
2										
3										
4										
5										

Authorized Work Assignment Ceiling

Contract Period:

Cost/Fee:

LOE: 0

08/01/2015 To 07/31/2017

This Action:

750

Total:

750

Work Plan / Cost Estimate Approvals

Contractor WP Dated:

Cost/Fee

LOE:

Cumulative Approved:

Cost/Fee

LOE:

Work Assignment Manager Name Michael Nye

Branch/Mail Code:

Phone Number: 703-347-0238

FAX Number:

(Signature)

(Date)

Project Officer Name Nancy Parrotta

Branch/Mail Code:

Phone Number: 202-564-5260

FAX Number:

(Signature)

(Date)

Other Agency Official Name Erin Ridder

Branch/Mail Code:

Phone Number: 513-487-2155

FAX Number:

(Signature)

(Date)

Contracting Official Name Sandra Stargardt-Licis

Branch/Mail Code:

Phone Number: 513-487-2006

FAX Number:

(Signature)

(Date)

Contract No. EP-C-15-012 CSC Gov't Solutions for Option Period 1

Work Assignment: 01-15

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LOE: 750 hours

Period of Performance: August 1, 2016 to July 31, 2017

I. Purpose

The purpose of this work assignment is to advance the understanding and best practices of Organic Materials Management.

To achieve this purpose the contractor shall be expected to finish the mapping tool and accompanying methodologies report, conduct a demonstration of

The intended audience for this project is the general public, public officials, owners and managers of food providers and the food waste reduction community.

II. Background

Currently, up to 40% of food produced in the U.S. is wasted, and 95% of wasted food is landfilled. Landfills are the third largest anthropogenic source of methane (CH₄) emissions in the U.S., accounting for 18% of total emissions in 2012. CH₄ contributes to more than one-third of today's anthropogenic warming because its global warming potential is at least 25 times greater than CO₂. Diverting wasted food and other organics from landfills dramatically reduces its greenhouse gas impact.

Many states are implementing regulations that require diversion of food waste and other organics from landfills. Massachusetts and California have banned commercial organic waste from landfills. Likewise, Connecticut and Vermont have set limits on food waste going to landfills.

States and communities know how much food in aggregate is landfilled. However, most are lacking detailed information on the sources of this waste, especially with regard to the food-processing sector. This lack of information regarding food waste producers is hampering efforts to implement regulations and reduce greenhouse gas emissions. As a result, there is a strong regional and national need to research commercial and industrial sources and quantities of food waste, and to make this information accessible and useful to communities in fulfilling greenhouse gas reduction and sustainability goals.

III. QUALITY ASSURANCE

Tasks in this work assignment do not require Quality Assurance Project Plans (QAPP). Consistent with the Agency's QA requirements, the contractor does not need to supplement the Contract Quality Assurance Project Plan (QAPP) or to prepare a Project Specific Quality Assurance project Plan (PQAPP).

IV. Detailed Task Description

Task 0: Work Plan and Monthly Progress Reports

The contractor shall develop a work plan that describes how each task will be carried out. The work plan shall include a schedule, staffing plan, level of effort (LOE), and cost estimate for each task, the contractor's key assumptions on which staffing plan and budget are based, and qualifications of proposed staff. If a subcontractor(s) is proposed and subcontractors are outside the local metropolitan area, the contractor shall include information on plans to manage work and contract costs. In addition,

The contractor shall use the "Project Planning Checklist" Attachment B to the Contract QMP to define QA tools and procedures used in each of the tasks, consistent with the requirements of the QMP. A copy of the completed checklist is to be provided to the ORD WACOR and other project participants for review and retained in the project files for each task.

If the scope of project tasks changes to include collection of environmental data, or use of secondary data, a determination will be made to develop a QAPP for the task, consistent with the requirements of *EPA Requirements for QA Project Plans (QA/R-5)*."

This task also includes monthly progress and financial reports. Monthly financial reports must include a table with the invoice LOE and cost amount broken out by the tasks in this WA.

Deliverables: Work plan and monthly progress and financial reports.

Task 1 Finish Wasted FOOD Mapping Tool Database and Methodologies Report

Description: The contractor has worked for over a year to develop the Wasted FOOD database and methodology report. Various problems have prevented the work from proceeding according to the anticipated schedule, but a lot of the work has been done. This task asks the contractor to finish the database and work with the Region 9 map creators to acquire and format the data appropriately.

Contractor shall support the creation of a national organics resources exchange, which will identify 1) the location of potential sources and estimated tonnages of unwanted organics (e.g. excess food or scraps generated by the industrial, agricultural, commercial and residential sectors); and 2) the location of potential users to receive those organic materials (e.g. food recovery groups, pig farms, composting operations, or facilities with anaerobic digesters).

Many states are implementing regulations that require diversion of food waste and other organics from landfills. Massachusetts and California have banned commercial organic waste from landfills. Likewise, Connecticut and Vermont have set limits on food waste going to landfills.

States and communities know how much food in aggregate is landfilled. However, most are lacking detailed information on the sources of this waste, especially with regard to the food-processing sector. This lack of information regarding food waste producers is hampering efforts to implement regulations and reduce greenhouse gas emissions. As a result, there is a strong regional and national need to research commercial and industrial sources and quantities of food waste, and to make this information accessible and useful to communities in fulfilling greenhouse gas reduction and sustainability goals.

Objectives

The objective of this project is three-fold:

Create a geodatabase identifying the location -- and, for some sources, estimate the quantity-- of wasted organic material produced by the industrial, agricultural, commercial and residential sectors, and;

Create a geodatabase identifying the location of facilities to manage those organic materials (e.g. food recovery groups, pig farms, composting operations or facilities with anaerobic digesters).

Work with EPA to populate an online interactive mapping tool that both displays the information described above and allows users to download subsets of that information.

Specific Tasks

Task 1.1: Estimate Quantity of Organic Waste Materials Using Established or Similar Methodology: List Methodology

With guidance and input from EPA Region 9, the Contractor will estimate the amount of excess edible food, food scraps, and other organic material for the selected agricultural, industrial, commercial and residential facilities using agreed-upon methodologies.

Fairly established methodologies exist to estimate the total quantity of food waste generated by facilities within specific sectors (i.e., hotels, supermarkets, universities, etc.). For the sectors where organics residual estimation methodologies exist or can be developed, the Contractor will estimate the quantity of food and other organic waste generated by each facility identified within those sectors. The state of Vermont has developed a map of Food Residual Generation using such methodologies, outlined in the table below. These estimation methodologies should be used for the following sectors, unless EPA and the Contractor determine another methodology is better:¹

The state of Connecticut has developed a similar map, and likewise found that estimates were not possible for three generator categories: food manufacturers and processors, food wholesalers and distributors, and major employers.² Further research needs to be done to determine if food residual estimation is feasible for the three

¹ Vermont's Agency of Natural Resources has provided a clear methodology for how they acquired their information. See "ANR Universal Recycling Materials Management Database & Map Methodology" for more:

http://www.anr.state.vt.us/dec/wastediv/solid/documents/Methodology_OrganicsMapDatabase.pdf

² See the reasons why in CT's report: "Identifying, Quantifying, and Mapping Food Residuals from Connecticut Businesses and Institutions"

<http://www.ct.gov/deep/lib/deep/compost/ssomfile/ssomreport.pdf>

sectors listed above. EPA and the Contractor will work collaboratively to review other studies and similar maps and speak with stakeholders in the effort to identify and/or develop suitable methodology for food manufacturers/processors, food wholesalers/distributors, major private employers, and possibly other sectors as identified. To start, the Contractor should review the Updated Mapping of Food Residual Generation in Connecticut and methodology used in Vermont, cited below.

In the event that EPA determines, with the Contractor's input, that a methodology exists or can be developed, the Contractor will estimate food waste generation for those sectors as well as those listed in the table below. For sectors where no estimation methodology is identified or can be developed, the facility profiles will not contain estimates, but their contact information will still be included in the tool.

Similarly, EPA and the Contractor will scope the possibility of breaking down the organics residual estimates into two discrete portions - "excess edible food" fit for safely feeding people, and "food scraps" fit for feeding animals, industrial uses, anaerobic digestion, composting, or other alternatives to landfill. If EPA determines, with the Contractor's input, that these portions can be estimated for certain sectors, the Contractor will estimate "excess edible food" and "food scraps" for each facility and include this information in their profiles.

We anticipate much interest in how the organic residual estimates were calculated. The Contractor will prepare a report detailing the research process that will be published to the tool's webpage to provide clear insight into the methods used to calculate the individual sector estimates.

FOOD SCRAP GENERATOR DATABASE CALCULATIONS - Produced by the Vermont Agency of Natural Resources, Department of Environmental Conservation, S

Type 1	Type 2	Type 3	Units (# of seats, students, or beds)	lbs/meal or lbs/wk/person	Meals/day	Calculation performed
Recreational Facility			# of beds	0.5	3	(beds) X (lbs/meal) X (3 meals/day) X (7 days/wk) + (2,000 lbs/ton)
Food Establishment	Bakery		# of seats	0.5	3	(seats) X (lbs/meal) X (3 meals/day) X (7 days/wk) + (2,000 lbs/ton)
	Camp		# of seats	0.5	3	(seats) X (lbs/meal) X (3 meals/day) X (7 days/wk) + (2,000 lbs/ton)
	Caterer		# of seats	0.5	3	(seats) X (lbs/meal) X (3 meals/day) X (7 days/wk) + (2,000 lbs/ton)
	Grocery Store		n/a	n/a	n/a	Estimate used, no consistent unit data point available
	Market		n/a	n/a	n/a	Estimate used, no consistent unit data point available
	Market	Beer, wine, liquor store	n/a	n/a	n/a	Estimate used, no consistent unit data point available
	Market	Farmers' Market	n/a	n/a	n/a	Estimate used, no consistent unit data point available
	Market	Online market	n/a	n/a	n/a	Estimate used, no consistent unit data point available
	Market	Specialty foods	n/a	n/a	n/a	Estimate used, no consistent unit data point available
	Private Club		# of seats	0.5	3	(seats) X (lbs/meal) X (3 meals/day) X (7 days/wk) + (2,000 lbs/ton)
	Restaurant		# of seats	1	3	(seats) X (lbs/meal) X (3 meals/day) X (7 days/wk) + (2,000 lbs/ton)
	Restaurant	Bars/Pubs	# of seats	0.5	3	(seats) X (lbs/meal) X (3 meals/day) X (7 days/wk) + (2,000 lbs/ton)
	Restaurant	Cafeteria	# of seats	1	3	(seats) X (lbs/meal) X (3 meals/day) X (7 days/wk) + (2,000 lbs/ton)
	Restaurant	Concession	# of seats	1	3	(seats) X (lbs/meal) X (3 meals/day) X (7 days/wk) + (2,000 lbs/ton)
	Restaurant	Deli	# of seats	0.5	3	(seats) X (lbs/meal) X (3 meals/day) X (7 days/wk) + (2,000 lbs/ton)
	Senior meals		n/a	n/a	n/a	Estimate used, no consistent unit data point available
Food Manufacturer			n/a	n/a	n/a	Estimate used, no consistent unit data point available
Food Shelf			n/a	n/a	n/a	Estimate used, no consistent unit data point available
Hospital			# of beds	0.5	3	(beds) X (lbs/meal) X (3 meals/day) X (7 days/wk) + (2,000 lbs/ton)
Residing/Assisted Living	Assisted Living Facility		# of beds	0.5	3	(beds) X (lbs/meal) X (3 meals/day) X (7 days/wk) + (2,000 lbs/ton)
	Nursing Home		# of beds	0.5	3	(beds) X (lbs/meal) X (3 meals/day) X (7 days/wk) + (2,000 lbs/ton)
	Residential Home		# of beds	0.5	3	(beds) X (lbs/meal) X (3 meals/day) X (7 days/wk) + (2,000 lbs/ton)
	Therapeutic Community Residence		# of beds	0.5	3	(beds) X (lbs/meal) X (3 meals/day) X (7 days/wk) + (2,000 lbs/ton)
School	College/University		# of students	1.13	n/a	(students) X (lbs/student/wk) + (2,000 lbs/ton)
	Elementary School		# of students	1.13	n/a	(students) X (lbs/student/wk) + (2,000 lbs/ton)
	Elementary/Middle School		# of students	0.93	n/a	(students) X (lbs/student/wk) + (2,000 lbs/ton)
	High School		# of students	0.35	n/a	(students) X (lbs/student/wk) + (2,000 lbs/ton)
	K-12		# of students	0.72	n/a	(students) X (lbs/student/wk) + (2,000 lbs/ton)
	Middle School		# of students	0.73	n/a	(students) X (lbs/student/wk) + (2,000 lbs/ton)
	PreK		# of students	1.13	n/a	(students) X (lbs/student/wk) + (2,000 lbs/ton)

Table 1: Food Scrap Generator Database Calculations³

³ Vermont Agency of Natural Resources. Food Scrap Generator Database Calculations, May 2014. Retrieved from <http://www.anr.state.vt.us/dec/wastediv/solid/documents/FSGCalculations-Final.pdf>

Task 1.2. COLLECT, REVIEW, AND INTEGRATE EXISTING ORGANICS SOURCE AND RECEPTOR DATASETS

SOURCES OF ORGANIC MATERIAL

RESIDENTIAL COLLECTION

The Contractor will also create a geodatabase containing information about communities with organic collection programs. EPA Region 9 will provide the most recent national data. The Contractor will work with EPA Region 9 and other participating regions to expand and refine the dataset.

Each record will contain at minimum the following information: 1) Community Name (e.g. City of San Francisco); 2) Name of the community department managing the program (e.g. SF Department of the Environment); 3) Contact information for the community department managing the program (i.e. address, phone number and e-mail or website); 4) Facility Location (Latitude and Longitude); 5) Name of hauler; 6) Type of Material Collected (e.g. yard trimmings; yard trimmings and food waste); and 7) Quantity of organic waste collected (in tons), if available; if not available, estimate quantity based on total volume of waste produced * 28% (EPA's MSW estimate for the percentage of waste that is yard trimmings (13.5%) and food waste (14.5%))⁴.

ASSOCIATION GEODATABASES

Several Industrial sectors have collected information from their membership on organic waste and its disposition that may be feasibly integrated into the national geodatabase. These include but are not limited to member groups of the Food Waste Reduction Alliance (FWRA) i.e. the Grocery Manufacturers Association, the Food Marketing Institute, and the National Restaurant Association.

GOVERNMENTAL GEODATABASES

Some States, Cities, and EPA Regions have existing geodatabases that may be usefully integrated into a national geodatabase.

RECEPTORS of organic material

ORGANIZATIONS RECOVERING WASTED FOOD TO FEED PEOPLE

The contractor will also create geodatabase containing information about entities that collect surplus food to feed hungry people. This geodatabase will include information about the following types of organizations: food recovery groups, food banks, and other groups that collect and/or distribute surplus food.

Each record of which will contain at minimum the following information: 1) Organization Name (e.g. SF-Marin Food Bank); 2) Organization Type (e.g. food recovery group); 3) Contact information (i.e. address,

phone number, and e-mail or website); 4) Facility Location (Latitude and Longitude); and 5) Materials accepted.

ORGANIZATIONS RECOVERING WASTED ORGANICS TO CREATE VALUE-ADDED PRODUCTS

The contractor will collect and create geodatabases containing information about entities that use discarded organics to create value-added products. This geodatabase will include information about the following: animal farms that can accept food scraps as feedstock, compost facilities, anaerobic digesters, biodiesel, and rendering facilities. Geodatabases from such organizations as AgSTAR, Biocycle and the US Compost Council (Find a Composter), the American Biogas Council, WERF and WEF should be collected, reviewed and integrated as useful.

In the final combined geodatabase for this group, each record will contain at minimum the following information: 1) Facility Name (e.g. Central Marin Sanitation Agency) 2) Facility Type (e.g. Water Resource Recovery Facility); 3) Contact information (i.e. address, phone number, and e-mail or website); 4) Facility Location (Latitude and Longitude); and 5) Material accepted (e.g. FOG, commercial food waste).

Records associated with facilities with anaerobic digesters will additionally include the following information: 6) Type of Digester (Batch or continuous? Mesophilic or thermophilic? High solids or low solids? Single stage or multistage?); 7) Biogas Production (cubic feet per year); and 8) Biogas Use (Flared? Internal Combustion Engine? Turbine? Microturbines? Boiler? Fuel Cell? CNG/LNG? Direct pipeline injection? Other?).

Records associated with *Water Resource Recovery Facilities* will additionally include the following information: 9) Facility Design Flow; 10) Facility Average Dry Weather Flow; and 11) Biosolids class.

Records associated with *Concentrated Animal Feedlot Operations with digesters* will additionally include the following information: 9) Population of Feed Digester (i.e. number of cows, pigs and/or chickens); and 10) Status (i.e. operational, under construction, or shut down).

NOTE: All Geodata developed under this task will include federally compliant metadata developed and validated using the EPA Metadata Editor. Spatial data, including spatially-referenced data and geospatial data, should be submitted: (a) in the ESRI File Geodatabase format; and (b) as unprojected geographic coordinates in decimal degree format using North American Datum 1983 (NAD83) or World Geodetic System 1984 (WGS84) as the datum. If applicable, submissions should include the collection method(s). Projected coordinates may optionally be included but must be documented. Spatial data should be accompanied by metadata, and such metadata should be compliant with the Federal Geographic Data Committee (FGDC) Content Standard for Digital Geospatial Metadata and its EPA profile, the EPA Geospatial Metadata Technical Specification. An add-on metadata editor for ESRI software, the EPA Metadata Editor (EME), complies with these FGDC and EPA metadata requirements and is available at <https://edg.epa.gov/EME/>. Map services will be developed and made available through the EPA Geoplatfrom following Region 9 GIS Center Standard Operating Procedures (contact: R9 GIS

Coordinator). The contractor will coordinate with the R9 GIS Coordinator to ensure that all deliverables meet broad federal and Agency guidelines and policies for geospatial deliverables.

Task 1.3: IDENTIFY SOURCE FACILITIES AND STANDARDIZE DATA

The Contractor will coordinate with EPA to determine what further information is needed after Task 1.1 and 1.2 have been completed. The Contractor may obtain information about agricultural, industrial, and commercial sources from a consumer research company that specializes in acquiring and analyzing U.S. business information for reference and research, such as ReferenceUSA. The consumer research company must manage a geo-referenced database of at least 10 million U.S. businesses. The Contractor may need to obtain information about select businesses associated with the following North American Industry Classification System (NAICS) codes:

NAICS #Definition

112120	Dairy Cattle and Milk Production
112210	Hog and Pig Farming
112310	Chicken Egg Production
112320	Broilers and Other Meat Type Chicken Production
112330	Turkey Production
112930	Fur-Bearing Animal and Rabbit Production
311111	Dog and Cat Food Manufacturing
311119	Other Animal Food Manufacturing
311221	Wet Corn Milling
311224	Soybean and Other Oilseed Processing
311225	Fats and Oils Refining and Blending
311230	Breakfast Cereal Manufacturing
311313	Beet Sugar Manufacturing
311314	Cane Sugar Manufacturing
311340	Nonchocolate Confectionery Manufacturing
311351	Chocolate and Confectionery Manufacturing from Cacao Beans
311352	Confectionery Manufacturing from Purchased Chocolate

311411	Frozen Fruit, Juice, and Vegetable Manufacturing
311412	Frozen Specialty Food Manufacturing
311421	Fruit and Vegetable Canning
311412	Frozen Specialty Food Manufacturing
311421	Fruit and Vegetable Canning
311422	Specialty Canning
311423	Dried and Dehydrated Food Manufacturing
311511	Fluid Milk Manufacturing
311512	Creamery Butter Manufacturing
311513	Cheese Manufacturing
311514	Dry, Condensed, and Evaporated Dairy Product Manufacturing
311520	Ice Cream and Frozen Dessert Manufacturing
311611	Animal (except Poultry) Slaughtering
311612	Meat Processed from Carcasses
311613	Rendering and Meat Byproduct Processing
311615	Poultry Processing
311710	Seafood Product Preparation and Packaging
311811	Retail Bakeries
311812	Commercial Bakeries
311813	Frozen Cakes, Pies, and Other Pastries Manufacturing
311821	Cookie and Cracker Manufacturing
311824	Dry Pasta, Dough, and Flour Mixes Manufacturing from Purchased Flour
311830	Tortilla Manufacturing
311911	Roasted Nuts and Peanut Butter Manufacturing
311919	Other Snack Food Manufacturing

311920	Coffee and Tea Manufacturing
311930	Flavoring Syrup and Concentrate Manufacturing
311941	Mayonnaise, Dressing, and Other Prepared Sauce Manufacturing
311942	Spice and Extract Manufacturing
311991	Perishable Prepared Food Manufacturing
311999	All Other Miscellaneous Food Manufacturing
312120	Breweries
312130	Wineries
424410	General Line Grocery Merchant Wholesalers
424420	Packaged Frozen Food Merchant Wholesalers
424430	Dairy Product (except Dried or Canned) Merchant Wholesalers
424440	Poultry and Poultry Product Merchant Wholesalers
424450	Confectionery Merchant Wholesalers
424460	Fish and Seafood Merchant Wholesalers
424470	Meat and Meat Product Merchant Wholesalers
424480	Fresh Fruit and Vegetable Merchant Wholesalers
424490	Other Grocery and Related Products Merchant Wholesalers
424510	Grain and Field Bean Merchant Wholesalers
424520	Livestock Merchant Wholesalers
424490	Other Grocery and Related Products Merchant Wholesalers
424810	Beer and Ale Merchant Wholesalers
424820	Wine and Distilled Alcoholic Beverage Merchant Wholesalers
424930	Flower, Nursery Stock, and Florists' Supplies Merchant Wholesalers
445110	Supermarkets and Other Grocery (except Convenience) Stores
445210	Meat Markets

445220	Fish and Seafood Markets
445230	Fruit and Vegetable Markets
445291	Baked Goods Stores
445292	Confectionery and Nut Stores
445299	All Other Specialty Food Stores
722310	Food Service Contractors
722320	Caterers
722511	Full-Service Restaurants
722513	Limited-Service Restaurants
722514	Cafeterias, Grill Buffets, and Buffets
722515	Snack and Nonalcoholic Beverage Bars
325193	Ethyl Alcohol Manufacturing
611310	Colleges, Universities, and Professional Schools
611110	Elementary and Secondary Schools
622110	General Medical and Surgical Hospitals
922140	Correctional Institutions (Prisons)
721110	Hotels and Motels
721120	Casino Hotels
713210	Casinos (except Casino Hotels)
424910	Farm Supplies Merchant Wholesalers (Animal feeds (except pet food)
311211	Flour Milling (Hominy grits)

Businesses associated with the identified NAICS codes will be selected based on the following criteria: 1) associated records will have been verified by the consumer research firm and 2) businesses will be of a particular size, defined by number of employees, annual revenue, or a similar metric. The desired size of the business will be determined by the Contractor and EPA.

To complete this task, the Contractor may be required to, but is not limited to:

Work with EPA to review and identify agricultural, industrial and commercial facilities with the highest potential for substantial food waste generation;

Create a geodatabase of agricultural, industrial, and commercial food processing facilities, each record of which will contain at minimum the following information: 1) Facility name; 2) Facility Contact Information (address, phone number, e-mail); 3) Facility Location (Latitude and Longitude); 4) Facility NAICS category; 5) Material Category (see below); 6) Number of Employees and/or annual revenue; and 7) Estimated waste production; (see Task 9.2).

Identify what "material category" each NAICS code should fall under. The material categories include *Lipid Materials* (such as materials associated with Fats and Oils Refining and Blending); *Simple carbohydrate material* (including material from bakeries, breweries, confectionaries and soda pop producers); *Complex Carbohydrate materials* (such as material associated with fruits and vegetables processing); *Protein Materials* (such as material associated with meat, poultry, and dairy processing); *Ligno-cellulosic Materials* (such as materials associated Flower, Nursery Stock, and/or Florists operations); *Mixed Materials* (materials from those operations with a more diverse waste stream, e.g. Grocery Stores, Food Service Contractors, Caterers, Full-Service Restaurants, Limited-Service Restaurants, Cafeterias, Grill Buffets, and Buffets, etc.); and *Other Materials* (including but not limited to materials associated with biofuels manufacturing).

Deliverables:

Deliverable 1: Acquire data required to finish database of sources and receptors across the U.S.

Deliverable 2: Edit and finalize the Wasted Food Methodology report based on the data and recent publications.

Task 2 Food Waste Tracking Technology Demonstration at Army Bases

Project Scope: Pursuant to the Memorandums of Understanding between the U.S. EPA's Office of Research and Development (ORD) and the U.S. Army for Installations, Energy and Environment (IE&E) around Net Zero, the objectives of this project is to provide a proof-of-concept evaluation and demonstration of a food waste prevention technology that can potentially be used to achieve zero waste related goals. The demonstrations will be held in dining facilities at two independent Army installations, each with distinct waste generation profiles and demographics: Fort Jackson, South Carolina and Fort Huachuca, Arizona. The evaluation will last approximately six months. Technical and research support services are envisioned for all phases of the project including baseline evaluation; demonstration support and monitoring; data analysis; and documentation of research results.

Background - The U.S. Environmental Protection Agency (U.S. EPA) seeks to prevent and reduce wasted food (and other organic materials) that will otherwise be lost as a resource into landfills. Food loss and waste in the United States accounts for approximately 31 percent—or 133 billion pounds—of the overall food supply available to retailers and consumers and has far-reaching impacts on food security, resource

conservation and climate change. Food loss and waste is the single largest component of disposed U.S. municipal solid waste, and accounts for a significant portion of U.S. methane emissions, which fuel climate change. This large volume of wasted food is a main contributor to the roughly 18 percent of total U.S. methane emissions that come from landfills—the third largest source of methane in the United States. The U.S. Department of Defense, through its vision for Net Zero Waste, seeks to reduce, reuse, and recover waste streams in order to create a culture that recognizes the value of sustainability—measured not just in terms of financial benefits, but benefits to maintaining mission capability, quality of life, relationships with local communities, and the preservation of options for the Army's future.

To this end, application of technologies that aid in determining the exact sources of food waste such as the *Lean Path* system can potentially reduce pre-consumer food losses—a major component of the organic waste stream for Army installations. *Lean Path* is a patented technology that focuses on food waste prevention and is potentially a viable option to reduce the volume of surplus food prepared in dining facilities. In addition, it can potentially provide actionable steps towards source reduction—a preferred step in EPA's Food Recovery Hierarchy. However, the application of this technology in the context of Army operations is unclear due to unique institutional and social/behavioral factors. Thus, its potential for use across Army installations seeking waste reduction goals is limited until these factors are better understood.

The goal of these demonstrations is to determine how this tracking technology that has been established and accepted in private sector restaurants and cafeterias fits into the Army dining facility system. Does it add to the time needed to prepare food and clean up? Does it contribute to reducing waste? What is the effect on the kitchen staff and management? Can costs and benefits be quantified, and if so, what are they?

The contractor shall acquire or lease the equipment needed to measure the food waste in one kitchen on each of two Army bases, Ft. Huachuca in Arizona, and Ft. Jackson in South Carolina. This equipment shall be LeanPath or equivalent, and compliant with Army data gathering and storage considerations. The contractor shall facilitate demonstration of the system for 6 months. In addition to monthly work assignment reporting the contractor will write a report on the process, outcome, and reaction to the in-kitchen demonstration. The report will address the results of the demonstration including the food waste shift if any, the time spent by kitchen staff, the attitude of kitchen staff, chefs, management, and any costs or savings attributable to the waste measurement.

Deliverables:

- 1) Monitor a food waste measurement demonstration of food waste tracking technology in one kitchen on each of two Army bases for 6 months.
- 2) Write a report on the process and results of the demonstration.

Task 3 Anaerobic Digestion Facilities Processing Wasted Food Data Collection Project

Project Summary

The Sustainable Food Management (SFM) program promotes diversion of wasted food from landfills. As this practice gathers momentum in this country, increasing amounts of municipal solid waste (MSW) will be processed using anaerobic digestion. To meet this need, sufficient capacity to process the organic fraction of MSW is needed. Therefore, building capacity for composting and anaerobic digestion is a critical component of the SFM strategy.

EPA is preparing to launch a data collection effort that will establish a baseline capacity for processing food waste in anaerobic digesters in the US. The data will be collected annually in order to track the growth of this capacity over time.

Region 3 has developed a preliminary data set of anaerobic digestion (AD) facilities processing food waste using publically available data.

Goal(s):

1. For the existing EPA data set: Identify and provide accurate contact information, where needed, for as many data collection respondents as possible.
2. Identify facilities not included in the existing EPA data set and provide accurate contact information for these facilities.
3. Insure the best possible response rate by contacting facilities that have not responded to the surveys.

EPA is seeking assistance in three areas as described below. Each task will be done in succession.

SPECIFIC TASKS

Task 3.1: Filling Gaps in the Existing Data Set

In order to collect the data – EPA has to make sure the data is collected effectively. To do this gaps need to be filled in the existing data prior to distribution of surveys.

- EPA will provide the contractor with a spreadsheet of all facilities in the existing EPA data set that require additional information.
- EPA anticipates this spreadsheet will include 50 or less facilities.
- The contractor will research and identify the following information for each facility:
 - o Street address of facility
 - o City (Facility is located in)
 - o State (Facility is located in)
 - o EPA Region (Facility is located in)
 - o Zip Code (for facility location)
 - o Facility phone number
 - o Contact Name

*The contact needs to be someone who is associated with and has knowledge of the operation of the facility. Administrative employees are not suitable contacts. Vendors that built the facilities are not preferred.

- o Contact Title, position, or affiliation to the facility

- Email of contact
- Phone number for contact
- Mailing address (for contact)
- Type of Facility (Stand-alone, WWTP, or On-Farm)
- Operating Status (Planning stage/Design Stage/Permitting, Under Construction, Operational, Temporary Shut-down, Ceased Operation, Other)

Task 3.2: Identification of Additional AD Facilities

EPA will provide the contractor with a spreadsheet of all facilities in the existing EPA data set. This spreadsheet currently includes 135 facilities.

Using the following sources the contractor will research and identify facilities that are not currently in the existing EPA data set. These facilities must be anaerobic digestion facilities that process food-based feedstocks.

- Data received from the Water Environment Federation (WEF);
- Data received from Environmental Research and Education Foundation (EREF);
- Data obtained from EPA's AgSTAR database;
- American Biogas Council (ABC) project profiles;
- Information obtained from BioCycle's Find-a-Digester platform;
- State databases; and
- Other relevant sources.

For each newly identified facility, the contractor shall collect all of the data identified in task 1.

Task 3.3: Respondent Follow-up

The data will be collected using three different survey monkey surveys, one for each type of digester that EPA is collecting data on (stand-alone digesters, digesters at wastewater treatment plants and on-farm digesters). After the data collection surveys have been distributed, responses will be automatically collected into spreadsheets by survey monkey. EPA will periodically identify what facilities have not yet provided responses.

EPA will provide the contractor with a list of facilities that have not provided responses to the surveys. The contractor will contact these respondents by phone to:

- Bring the survey to the respondents attention and request that the respondent complete the survey
- Answer respondents questions about the survey
- Clarify responses and/or
- Manually collect data over the phone and enter into the surveys if requested to do so.

Deliverables:

1. For the existing EPA data set: Identify and provide accurate contact information, where needed, for as many data collection respondents as possible.
2. Identify facilities not included in the existing EPA data set and provide accurate contact information for these facilities.

3. Insure the best possible response rate by contacting facilities that have not responded to the surveys. Contact non-responders and attempt to complete survey. It is anticipated that there will be approximately 40 facilities to contact.

V. SCHEDULE/DELIVERABLES

Task	Deliverables	Dates
0	1)Workplan 2)Monthly Progress and Financial Reports	1)20 days after receiving WA 2)Monthly
1 Wasted FOOD Map Database and Methodology Report	1)complete database 2)finish report	1)Aug 31 2)Aug 31
2 Food Waste Tracking Technology Demonstration at Army Bases	1)Demonstration facilitation 2)Report 3)Revised report following EPA comments	1) Approx. Aug. 15 – Feb. 15 2) 30 days after demonstration ends 3) 30 days after initial report
3 Anaerobic Digestion Facilities Processing Wasted Food Data Collection	1)complete EPA provided database 2) research facilities missing from EPA database 3)contact non-respondents of survey	1) Sept 30 2) Oct 31 3) 30 days following EPA distribution of surveys

VI. REPORTING REQUIREMENTS

Monthly Progress Reports (including a progress evaluation discussion)

Financial Reports

Project-Specific Reports

<p>Cost Management and Control: The Contractor shall monitor, track and accurately report level of effort, labor cost, other direct cost and fee expenditures to EPA through progress reports and approved special reporting requirements.</p> <p>The Contractor shall assign appropriately leveled and skilled personnel to all tasks, practice and encourage time management, and ensure accurate and appropriate time keeping.</p>	<p>The contractor shall manage costs to the level of approved ceiling on the work assignment. The contractor shall notify the WAM/PO when 75% of the approved funding ceiling for the work assignment is reached.</p>	<p>The EPA PO will routinely meet with the Contractor's Project Manager to discuss the work progress and contract and individual work assignment expenditures. The EPA PO shall review the Contractor's monthly progress reports and request the WAMs verification of expenditures and technical progress before authorizing invoice payments.</p>	<p>Unsatisfactory rating under the category of Cost Control in the NIH Performance Evaluation System when the contractor does not meet the measurable performance standards during an applicable period of performance.</p>
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<p>Technical Effort: The analyses or products developed by the contractor shall be factual and defensible and based on sound science and engineering. All data shall be collected from reputable sources and quality assurance measures shall be conducted in accordance with contract, agency requirements and any additional requirements outlined in individual work assignments or technical directives. Any work requiring the contractor to provide options or recommendations shall include the rationale used in selecting the option/recommendation and all other options and recommendations considered.</p>	<p>All analyses conducted for EPA by the Contractor must be factual and based on sound science and engineering. All analyses and products (initial and final drafts) shall conform in format and content to requirements specified by the WAM in written technical direction, and should meet the objectives stated in the work assignment. All initial draft documents shall be clearly written at a level appropriate to the targeted audience. All information shall be factual, technically sound, and accurate, with data sources identified.</p> <p>Draft versions of a document shall require no more than two editorial revisions.</p>	<p>EPA will review all analyses and work products conducted by the Contractor and will independently consider the merit. EPA may opt to peer review analyses to further validate merit.</p> <p>The EPA WAM/TM (Task Manager) will review initial drafts to assess technical accuracy and editorial quality. The WAM/TM will identify all inaccuracies and needed edits and corrections to the contractor in the initial review of draft documents.</p>	<p>Unsatisfactory rating under the category of QUALITY OF PRODUCT OR SERVICE in the NIH Performance Evaluation System when the contractor does not meet the measurable performance standards during an applicable period of performance, even after review input and follow up discussion by Agency personnel.</p>
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<p>Socio-Economic Utilization: The Contractor shall assess all agency requirements outlined in work assignments for opportunities to fully utilize the knowledge and experience of its socio-economic team members. Work shall be allocated in a manner that ensures the Contractor's annual subcontracting goals are met.</p>	<p>The Contractor shall meet a standard of at least 80% of the dollar goals outlined in their subcontracting plan during each period of performance, unless Agency priorities prevent or preclude such tasking.</p>	<p>EPA will monitor the contractor's utilization of socio-economic firms by reviewing the contractor's submittal of Standard Forms (SF) 294 and (SF) 295.</p>	<p>If less than 80% is reached during an applicable period of performance, the contractor shall outline the steps that will be taken to meet the annual goals outlined in their plan, or provide justification as to the rationale for the lack of meeting the subcontracting plan goals. Performance that does not meet the stated goals without sufficient justification will be reported as an Unsatisfactory rating under the category of BUSINESS RELATIONS, and MEETING SDB SUBCONTRACTING REQUIREMENTS in the NIH Performance Evaluation System.</p>
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EPAUnited States Environmental Protection Agency
Washington, DC 20460**Work Assignment**

Work Assignment Number

01-16

☐ Other☐ Amendment Number:Contract Number
EP-C-15-012

Contract Period 08/01/2015 To 07/31/2017

Title of Work Assignment/SF Site Name

Base

Option Period Number 1

NCEA Websites

Contractor

CSC GOVERNMENT SOLUTIONS LLC

Specify Section and paragraph of Contract SOW

2.2, 2.3, 2.4, 2.10, 2.15, 2.17, 3.1.2, 3.1.3, 3.1

Purpose:



Work Assignment



Work Assignment Close-Out



Work Assignment Amendment



Incremental Funding



Work Plan Approval

Period of Performance

From 08/01/2016 To 07/31/2017

Comments:



Superfund

Accounting and Appropriations Data



Non-Superfund

SFO

(Max 2)



Note: To report additional accounting and appropriations data use EPA Form 1900-69A.

Line	DCN (Max 6)	Budget/FY (Max 4)	Appropriation Code (Max 6)	Budget Org/Code (Max 7)	Program Element (Max 9)	Object Class (Max 4)	Amount (Dollars)	(Cents)	Site/Project (Max 8)	Cost Org/Code
1										
2										
3										
4										
5										

Authorized Work Assignment Ceiling

Contract Period:

Cost/Fee:

LOE: 0

08/01/2015 To 07/31/2017

This Action:

3,380

Total:

3,380

Work Plan / Cost Estimate Approvals

Contractor WP Dated:

Cost/Fee

LOE:

Cumulative Approved:

Cost/Fee

LOE:

Work Assignment Manager Name Maureen Johnson

Branch/Mail Code:

Phone Number: 703-347-8611

FAX Number: 305-425-8314

(Signature)

(Date)

Project Officer Name Nancy Parrotta

Branch/Mail Code:

Phone Number: 202-564-5260

FAX Number:

(Signature)

(Date)

Other Agency Official Name

Branch/Mail Code:

Phone Number:

FAX Number:

(Signature)

(Date)

Contracting Official Name Donna Reinhart

Branch/Mail Code:

Phone Number: 513-487-2114

FAX Number:

(Signature)

(Date)

**WORK ASSIGNMENT
PERFORMANCE WORK STATEMENT (PWS)**

Contract No. EP-C-15-012

Work Assignment: WA-01-16

WACOR:	Name:	<u>Maureen Johnson</u>
	Branch:	<u></u>
	Division:	<u>Immediate Office</u>
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	Mail code:	<u>8601P</u>
	Street Address:	<u>1200 Pennsylvania Ave. , NW</u>
	City, State, Zip:	<u>Washington, DC 20460</u>

Alt WACOR:	Name:	<u>Susan Rieth</u>
	Branch:	<u>Quantitative Modeling Branch (QMB)</u>
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	Mail code:	<u>8601P</u>
	Street Address:	<u>1200 Pennsylvania Ave. , NW</u>
	City, State, Zip:	<u>Washington, DC 20460</u>

LOE: 3380 hours

Period of Performance: August 1, 2016 to July 31, 2017

Title: Support for the NCEA Websites and Databases

PWS Sections: 2(b), 2(c), 2.2, 2.3, 2.4, 2.10, 2.15, 2.17, 3.1.2, 3.1.3, 3.1.5, 3.1.6, 3.1.7, 3.1.9, 3.1.10, 3.1.11, 3.1.12, 3.1.13, 3.1.15, 3.1.17, 3.1.18, 3.1.19, 3.1.20, 3.2, 3.4

I. PURPOSE:

The main purpose of this work assignment is to support the production of and implementation of materials on the EPA website. It is a primary mission of the Office of Research and Development's National Center for Environmental Assessment (NCEA) to provide the public with access to the best science in the form of research products and information about human health and ecological risk assessments. On target with this, one of NCEA's critical goals is to support the ORD Research Priorities, these are new robust research programs that in varying levels of need, depend on the strong presence of NCEA's websites like the Exposure Factors Program/Hand Book and tool box (EPA-Expo-Box), the Benchmark Dose Software (BMDS), the Casual Analysis/Diagnosis Decision Information System (CADDIS), the Integrated Risk Information System (IRIS) database, the EPA RISK assessment website (which includes links to most of NCEA's products and publications), and various other NCEA websites that include guidance, training, and workshop outreach material that capture the full picture of risk assessment.

Objectives

The primary goal of all these systems and web sites is to enhance preparedness, utility and business resiliency, detection, response, and recovery efforts relative to assessing risk in the environment, vulnerabilities, and threats if a natural calamity or incident occurs. Additionally, NCEA seeks innovative ways to distribute information to the targeted audience by utilization of emerging technologies especially in the area of Web 2.0. This not only allows NCEA to be more "green" in cutting back on the less environmentally friendly methods of communications, but also to demonstrate its alignment with the administration goals of making agency services and information more accessible to citizens so they can see value in their government.

Risk Assessment is one of the key areas of environmental protection all agency programs focus on and each of the systems mentioned above have a strong ties to assessments of water quality and human health. In each of these programs, NCEA seeks the best way to get information out to the correct and varied target audiences from our websites. We also require support for the dissemination of guidance and information related to the understanding of climate change impacts, adaptation, and mitigation measures within the mission of EPA.

The purpose of this work assignment is to: support new development, on-going maintenance and long-term operation of all NCEA websites and databases in support of communicating, education, and outreach of the mission of the NCEA center and organization. NCEA is the principal organization for production of EPA research reports on human health and ecological risk assessments in the Office of Research and Development. Therefore it is imperative that NCEA's websites offer streamlined pathways (quick easy to use, task oriented and topical) to this research, models, and data technology. Based on our annual website statistics it is evident that NCEA's websites (and interactive databases driving them), that they are critical to supporting thousands of researchers all around the world.

The expectations of this work assignment is for improved designs of the NCEA websites and database to meet our stakeholders and external (and internal) needs while complying with the latest Agency web guidance and web initiatives. To that end, this work assignment requires improvements to the NCEA websites that will incorporate the agency's Drupal template design efforts, reduce any redundant, outdated content (referred to by the EPA web-guide as "ROT") on the website, and reduce the cost of maintenance and development on the site through the use of this new technology and Agency approved software.

The tasks described in this work assignment will outline the steps necessary to achieve the project's goals. Working together, the various tasks will complement one another to produce a more efficient, cohesive public experience that will improve the usefulness of the web site and support the business process of the NCEA organization.

To achieve this outcome the contractor shall be expected to provide:

- 1) Operation and maintenance of the NCEA Databases.
- 2) Development to the NCEA websites based on Agency guidance, program changes, and new technology.
- 3) Web analytics for site usability/enhancement and improved communication.
- 4) Technical support by a Subject Matter Expert (SME) with expertise to provide guidance on areas of toxicology (when needed) and separately for database design/development.

Requirements

In order to perform the work under this work assignment the contractor should have:

- 2 or more staff members who have accounts on Drupal.org and provide their user ID's in order to verify this work experience/activity in the Drupal forum environment. They also need to have a minimum of 2 years of experience with either managing a large scale web site in Drupal or with engineering in a Drupal environment.
- 2 or more staff members on this work assignment who have accounts on EPA's Web mailing list or Editors-in-Chief mailing list for a minimum of 2 years to be knowledgeable with the EPA Web guidelines and standards of development. They should also have 1-2 years of experience with EPA's Drupal environment and have experience with the editor and webmaster roles in order to complete the task directives within this work assignment.
- 1 or more staff members on this work assignment with 2 or more years of experience in the following technologies: MySql Database Administration, Oracle Database Administration, Oracle Application Development, ColdFusion Application Development, JavaScript coding, and integrating dynamic application development with a Drupal website.
- 1 or more staff members with a Master's degree or PH.D. in toxicology to provide guidance and

input as needed.

The contractor should have staff that are skilled enough with the Drupal Web Content Management System (WCMS) software to have the ability to articulate design enhancements to the EPA Design Team (Office of Web Communication) that will help improve the experience of visitors to the EPA websites under this work assignment.

II. BACKGROUND:

EPA's National Center for Environmental Assessment (NCEA) is a leader in the science of human health and ecological risk assessment, a process used to determine how pollutants or other stressors may impact human health and the environment. NCEA occupies a critical position in EPA's Office of Research and Development (ORD) between researchers in other parts of ORD and outside of EPA who are generating new findings and data and the regulators in EPA's program and Regional offices who must make regulatory, enforcement, and remedial action decisions. NCEA prepares technical reports and assessments that integrate and evaluate the most up-to-date research and serve as major elements of the science foundation supporting EPA policies. NCEA also conducts cutting-edge research to develop innovative quantitative risk assessment methods and tools that help extrapolate between experimental data and real-world scenarios, improve our understanding of uncertainties, and facilitate careful weighing of evidence. This is why this work assignment is critical in supporting the mission of NCEA and the Environmental Protection Agency.

III. QA REQUIREMENTS:

Consistent with the Agency's QA policy and program requirements CIO 2105, the contractor does not need to supplement the Contract Quality Assurance Plan (QAPP) or to prepare a Quality Assurance Project Plan (QAPP) specific to this Work Assignment. This assignment does not involve scientific data and is solely administrative.

IV. STATEMENT OF WORK

All direction under this WA will be provided as written technical directives (TDs) from the WACOR, or Alternate WACOR, as appropriate. If provided first as verbal technical direction to the contractor, it will be confirmed in writing within 5 calendar days, with a copy to the Contract Level Contracting Officer's Representative (CL COR) and the Contracting Officer (CO), and is subject to the limitations of the technical direction contract clause. Each initial deliverable shall be provided to the EPA WACOR and EPA CL COR in draft form for review and comment. The contractor shall incorporate WACOR review comments into revisions of the drafts. All drafts and final reports shall be approved by the WACOR.

All efforts under this list of task description shall be in compliance with all existing and new Agency and ORD web requirements, and/or changes in the EPA server environment, NCEA Managements Directive or in the supporting technology. The contractor shall perform the following tasks:

Task 0: Work Plan, Progress Evaluation and Monthly Progress Reports

The contractor shall develop a work plan that describes how each task will be carried out. The work plan shall include a schedule, staffing plan, level of effort (LOE), and cost estimate for each task, the contractor's key assumptions on which staffing plan and budget are based, and qualifications of proposed staff. If a subcontractor(s) is proposed and subcontractors are outside the local metropolitan area, the contractor shall include information on plans to manage work and contract costs. In addition, the work plan shall specify that the contractor does not need to supplement the Contract QAPP or to prepare a PQAPP.

This task also includes monthly progress and financial reports. Monthly financial reports must include a table with the invoice LOE and cost amount broken out by the tasks in this WA. In addition, this table should provide costs and estimates at the subtask level and have the capability to track costs to the type of work performed. It is recommended that all costs associated with projects and/or work requests shall be reported in the monthly report as well as at an aggregate level. The work plan shall also provide an analysis of the existing and projected constraints, and the feasibility of accomplishing the project's purpose.

Secondly, the contractor shall participate in bi-weekly meetings to discuss open work requests under the various task in this work assignments, get technical clarification, or discuss any issues that may have come up since the assignments were given. As a result of these meetings, the contractor will submit meeting minutes with a list of assignments, and then at the end of the month, submit these as part of the monthly progress report.

The purposes of the progress report is to list completed deliverables and accomplishments. The monthly report can also include details on the finished assignments, the steps toward completing the larger tasks as they are done, any problems they may have encountered, or any changes in the schedule for completing the work request. The contractor shall continually review the types of work requests that are assigned and propose improvements, striving to implement efficiencies in performance when complimentary requirements are issued or the process can be improved in the work that is done. The contractor shall assure that duplication of effort relative to other ongoing work assignments under this contract is not occurring.

Deliverables: Work plan and monthly progress and financial reports.

Task 1: Operations and support for the NCEA Databases

With the vast number of reports, tools and websites that NCEA uses to serve content to the public we use several Oracle backend databases to manage many of these products. This first task will require the support, operation and maintenance of these databases. In addition, to database administration (adding users, managing roles, writing SQL scripts for database updates), the contractor will need to also maintain data entry screens for the EPA's maintenance of the content stored in these back-end systems. The current interfaces to these databases is through ColdFusion based Administration systems.

Subtask 1.1: Support of the NCEA Tables residing in the EIMS Database

Support of this database includes on-going operations and maintenance to include, but not be limited to: new table development, retirement of tables/removal, data entry form improvements, system integration for better quality control, link checking, improved searching methods, exports, uploads, downloads, web analytics, or archiving retired content.

Subtask 1.1.1 Support for the EPA-Expo-Box Application

Provide database administrative or dynamic application development (to front-end software to an Oracle database) for the Expo-Box application. Provide operation and maintenance per specifications outlines in subtask 1.1.

Subtask 1.1.2 Support for the EPA-Eco-Box Application

Provide database administrative or dynamic application development (to front-end software to an Oracle database) for the Eco-Box application. Provide operation and maintenance per specifications outlines in subtask 1.1.

Subtask 1.1.3 Support for the Water Quality Assessment Report Application

Provide database administrative or dynamic application development (to front-end software to an Oracle database) for the WQA-Report application. Provide operation and maintenance per specifications outlines in subtask 1.1.

Subtask 1.2: Support for the Integrated Risk Information System (IRIS) Database

Support of this database includes on-going operations and maintenance to include, but not be limited to: new table development, retirement of tables/removal, data entry form improvements, system integration for better quality control, link checking, improved searching methods, exports, uploads, downloads, web analytics, or archiving retired content.

Subtask 1.3: Support for the Casual Analysis Diagnosis Decision Information System (CADDIS) Database

Support of this database includes on-going operations and maintenance to include, but not be limited to: new table development, retirement of tables/removal, data entry form improvements, system integration for better quality control, link checking, improved searching methods, exports, uploads, downloads, web analytics, or archiving retired content.

Task 2: Development to the NCEA websites based on Agency guidance, program changes, and new technology.

The contractor shall provide the following as it pertains to products from NCEA program:

- Provide maintenance for the NCEA Web sites, which includes site updates as necessary to comply with ORD and Agency Web requirements, and/or changes in the EPA server environment or in the supporting database(s).
- Provide other modifications or enhancements as specified in Technical Directives (TDs) throughout the period of performance, including enhancements of selected Drupal pages, addition of new static and dynamic web pages, and redesign of selected pages to:
 - Fulfill the mission of the Agency and any related Web initiatives
 - Improve the performance of the site,
 - Comply with Section 508 for Accessibility, and
 - Improve the usability based on recommendations from NCEA, ORD or Agency stakeholder feedback.
- Provide Section 508 compliant reports (in PDF format) for posting on the NCEA websites and databases.
- Verify Section 508 compliance of products generated from within NCEA.
- Provide support in the review the site for broken links, redundant, outdated, trivial (ROT) content, usability/focus groups, and other EPA initiatives to improve the function of the website.

The contractor shall be responsible for maintain the NCEA Internet (and in some cases Intranet) websites and performing any related web support as requested. This task includes the following subtasks:

Subtask 2.1: Support for the Risk Assessment (Risk) websites

All new and major revisions to web pages will be reviewed and tested by the contractor, then by the content provider and/or the WACOR. Routine or enhanced modifications will be tested by the contractor, before they are sent to the WACOR for review prior to deployment. All web pages that are part of this website shall be consistent with ORD and Agency policies regarding the appearance, format, standards and function of Internet and Intranet web pages. Additionally, the web pages on the Risk websites shall not compromise the security procedures enforced through the NCC facility in RTP, NC.

This includes providing support to the following website(s):

- <http://www.epa.gov/risk> (or any future aliases this may be called)
- <http://www.epa.gov/erasc> (or any future aliases this may be called)

Subtask 2.1.1 Support for the EPA-Expo-Box (Expo-box) Website

All new and major revisions to Drupal web pages will be reviewed and tested by the contractor, then by the content provider and/or the WACOR. Routine or enhanced modifications will be tested by the contractor, before they are sent to the WACOR for review prior to deployment. All web pages shall be consistent with ORD and Agency policies regarding the appearance, format, standards and function of Internet and Intranet web pages. Additionally, the web pages on the ISA website shall not compromise the security procedures enforced through the NCC facility in RTP, NC.

This includes providing support to the following website(s):

- <http://www.epa.gov/expobox> (or any future aliases this may be called)

Subtask 2.1.2 Support for the EPA-Eco-Box (Eco-box) Website

All new and major revisions to web pages will be reviewed and tested by the contractor, then by the content provider and/or the WACOR. Routine or enhanced modifications will be tested by the contractor, before they are sent to the WACOR for review prior to deployment. All web pages shall be consistent with ORD and Agency policies regarding the appearance, format, standards and function of Internet and Intranet web pages. Additionally, the web pages on the ISA website shall not compromise the security procedures enforced through the NCC facility in RTP, NC.

This includes providing support to the following website(s):

- <http://www.epa.gov/ecobox> (or any future aliases this may be called)

Sub-task 2.2 Support for the Integrated Science Assessments (ISA) website

All new and major revisions to web pages will be reviewed and tested by the contractor, then by the content provider and/or the WACOR. Routine or enhanced modifications will be tested by the contractor, before they are sent to the WACOR for review prior to deployment. All web pages shall be consistent with ORD and Agency policies regarding the appearance, format, standards and function of Internet and Intranet web pages. Additionally, the web pages on the ISA website shall not compromise the security procedures enforced through the NCC facility in RTP, NC.

This includes providing support to the following website(s):

- <http://www.epa.gov/isa> (or any future aliases this may be called)

Subtask 2.3: Support for the Integrated Risk Information System (IRIS) website

All new and major revisions to web pages will be reviewed and tested by the contractor, then by the content provider and/or the WACOR. Routine or enhanced modifications will be tested by the contractor, before they are sent to the WACOR for review prior to deployment. All web pages shall be consistent with ORD and Agency policies regarding the appearance, format, standards and function of Internet and Intranet web pages. Additionally, the web pages on the IRIS websites shall not compromise the security procedures enforced through the NCC facility in RTP, NC.

This includes providing support to the following website(s):

- <http://www.epa.gov/iris> (or any future aliases this may be called)
- <http://intranet.epa.gov/ncea/iristrack/index.htm> (or any future aliases this may be called)
- <https://cfint.rtpnc.epa.gov/ncea/iristrac/index.cfm>
- <http://www.epa.gov/dioxin> (or any future aliases this may be called)

Subtask 2.4: Support for the Benchmark Dose Modeling System (BMD) website

All new and major revisions to web pages will be reviewed and tested by the contractor, then by the content provider and/or the WACOR. Routine or enhanced modifications will be tested by the

contractor, before they are sent to the WACOR for review prior to deployment. All web pages shall be consistent with ORD and Agency policies regarding the appearance, format, standards and function of Internet and Intranet web pages. Additionally, the web pages on the BMDS website shall not compromise the security procedures enforced through the NCC facility in RTP, NC.

This includes providing support to the following website(s):

- <http://www.epa.gov/bmnds>

Subtask 2.5: Support for the CADDIS website

All new and major revisions to web pages will be reviewed and tested by the contractor, then by the content provider and/or the WACOR. Routine or enhanced modifications will be tested by the contractor, before they are sent to the WACOR for review prior to deployment. All web pages shall be consistent with ORD and Agency policies regarding the appearance, format, standards and function of Internet and Intranet web pages. Additionally, the web pages on the CADDIS websites shall not compromise the security procedures enforced through the NCC facility in RTP, NC.

This includes providing support to the following website(s):

- <http://www.epa.gov/caddis> (or any future aliases this may be called)
- <http://www.epa.gov/bristolbay> (which includes the waters of the US, Bristol Bay Assessment, mountaintop mining and other water-based ecological assessments done by NCEA)

Subtask 2.6: Support for the Global website

All new and major revisions to web pages will be reviewed and tested by the contractor, then by the content provider and/or the WACOR. Routine or enhanced modifications will be tested by the contractor, before they are sent to the WACOR for review prior to deployment. All web pages in this web area shall be consistent with ORD and Agency policies regarding the appearance, format, standards and function of Internet and Intranet web pages. Additionally, the web pages on the NCEA (Global) websites shall not compromise the security procedures enforced through the NCC facility in RTP, NC.

This includes providing support to the following website(s):

- <https://www.epa.gov/risk/global-change-research-program-products-and-publications> (or any future aliases this may be called)
- <https://www.epa.gov/risk/traits-data-sources-and-metadata> (or any future aliases this may be called)
- <http://www.epa.gov/iclus> (or any future aliases this may be called)

Subtask 2.6.1. Support for the Water Quality Assessment Reports Website

All new and major revisions to web pages will be reviewed and tested by the contractor, then by the content provider and/or the WACOR. Routine or enhanced modifications will be tested by the contractor, before they are sent to the WACOR for review prior to deployment. All web pages shall be consistent with ORD and Agency policies regarding the appearance, format, standards and function of Internet and Intranet web pages. Additionally, the web pages on the ISA website shall not compromise the security procedures enforced through the NCC facility in RTP, NC.

This includes providing support to the following website(s):

- URL will be provided by written technical direction (or any future aliases this may be called)

Subtask 2.7: Support for the Development of new Websites or Updates According to new EPA Specifications

The contractor shall be responsible for overseeing updates to the NCEA web sites (listed above) by adhering to the EPA Web guidelines at <http://www.epa.gov/webguide>. The contractor may be asked to make updates to these based on new technology or EPA Web Guidance as new direction becomes available. Specifically, this task may provide contractor support to provide a range of strategic communications and outreach requests to develop new features to our web sites and databases based on the newest technologies that EPA Web is considering. Code re-use is recommended with any enhance that may affect our web sites.

This task may include the evaluation of Web 2.0 technology to include but not be limited to:

- Development of the NCEA web sites in the newest Agency Web standards and technology, utilizing efficiencies of the latest Web 2.0 technology/applications.
- Development of media (YouTube, podcasts, etc) to promote the information of NCEA's research.
- Development of on-line training or support web sites for webinars to promote the information of NCEA research.
- Use of XML, Drupal, Twitter, Govdelivery, Blogging, or RSS feeds to promote the use of NCEA research to a wider audience.
- Development of web sites or databases using more sustainable solutions (with technology).
- Development of improved integration and sharing with like systems/databases across Government-wide platforms, in an effort to support data sharing or access via open data initiatives (like NSCEP, SEMS, SI, NARA, e-Chem portal, Data.gov, etc).

Deliverables

The contractor shall provide updates to the web site and database copying the WACOR on all correspondence regarding these updates. For estimating purposes only, the contractor shall assume they will produce 2-3 podcasts, support 1-2 on-line training web sites, and add 2 new Web. 2.0 enhancements to the NCEA Web sites listed above.

The contractor shall include in the Monthly Progress Report any work performed under this task.

Deliverables

The contractor shall provide updates to the websites under Task 2 as needed, copying the WACOR on all correspondence regarding these updates. For estimating purposes only, the contractor shall assume they: will provide monthly reviews and corrections for missing metadata, broken links and ROT on all NCEA Websites; will develop & implement improvements or updates to a minimum of three websites annually to a maximum of six websites; and will prepare a minimum of 50 to a maximum of 600 PDFs for posting.

The contractor shall provide Monthly Progress Reports outlining any work performed under this task.

Task 3: Web Analysis and Outreach Communication

The contractor shall be responsible for analyzing EPA's Google Analytics web site statistics for NCEA web sites and providing 2 bi-annual reports on recommendations for improvements which will be implemented as part of Task 2. This means they will:

- Provide an annual report with information on web site analysis using EPA's tools (Google Analytics, Sitebeam, etc) to provide a path –forward to improve the design of the web sites listed above.
- Perform web site usability testing to improve the use of the site and to develop personas for site usage design.
- Provide link checking reports, fixing broken links and noting external links on all the NCEA web sites and databases.
- Respond to comments sent to the NCEA Web sites (comment forms) listed above, where they are the primary supporting contractor.

Deliverables

The contractor shall provide a consolidated report with these results on a bi-annual and yearly basis to be used to examine how the web sites are being utilized. These reports should include web usage statistics (graphs) for all these web sites listed in task 2 and include any other related data. For estimating purposes only, the contractor shall assume they will provide (2) bi-annual comprehensive reports, with the later containing a summary report at the end of the year; they will perform 1 -2 usability tests on the web sites defined in Task 2 using EPA analytical tools listed above; and will make recommendations in the bi-annual and annual report that should improve the statistics to these sites by a minimum of 15% over the course of a year.

The contractor shall include in the Monthly Progress Report any work performed under this task.

Task 4: Technical Consulting

Technical Subject Matter Expert (SME) Support with expertise to provide guidance on areas of toxicology (when needed), website development, and database administration

The contractor shall be responsible for providing individual subject matter experts (SME) with expertise to provide technical support in the following areas (on a case-by-case basis):

- Toxicology (Risk Assessment, Dose-response, Hazard Identification, IRIS Assessments, etc)
- Database Administration and Development (Ajax, Apex, Oracle, Access, SQLplus, MySQL, etc)
- Website Development (Drupal, JavaScript, Flash, Sharepoint, 508 compliance, etc)

Under this task the SME may be asked to provide a technical review on any new technology to the

website or database design issue related to operating NCEA's websites. This may also include migrating new web products for the NCEA websites (see listed in Task 2) to the EPA environment, database development support, or any website improvements. Technical review/commenting/editing may be necessary before new websites are released to the public.

SME's with a toxicological background will be asked to review implications of search terms in relation to the performance of the IRIS database and website.

Deliverables

The contractor shall provide written correspondence to the WACOR on anything related to this task. For estimating purposes only, the contractor should assume the SME may be asked to attend at a minimum two face-to-face discussions (to a maximum of 25 phone-based technical issues discussions) about the improvements discovered in Tasks 1-3.

The contractor shall include in the Monthly Progress Report any work performed under this task.

V. SCHEDULE/DELIVERABLES

The contractor should refer to the individual tasks described in section IV for schedule and deliverable specifications. The contractor should plan to attend bi-weekly meetings with the WACOR to review work assignments (outlined in the TDs) to discuss details of the work, clarification of requirements, and schedule of deliverables. Anything agreed in these discussions should be documented by the contractor and emailed to the WACOR for confirmation. All deliverables and schedules should be listed in the progress report for official notification of receipt from the EPA.

VI. REPORTING REQUIREMENTS

Monthly Progress Reports (including a progress evaluation discussion)
Financial Reports (with table of task and subtask totals).

VII. GREEN MEETINGS AND CONFERENCES

The contractor shall follow the provision of EPA prescription 1523.703-1, *Acquisition of environmentally preferable meeting and conference services (May 2007)*, for the use of off-site commercial facilities for an EPA event, whether the event is a meeting, conference, training session, or other purpose. Environmental preferability is defined at FAR 2.101, and shall be used when soliciting quotes or offers for meeting/conference services on behalf of the Agency.

The contractor shall assume no more than 2-4 face-to-face (for local contractors only) conferences or meetings to provide customer support under this work assignment.

VIII. CONFERENCES AND WORKSHOPS

The contractor shall immediately alert the WACOR to any anticipated event under the work assignment which may result in incurring an estimated \$20,000 or more cost, funded by EPA, specific to that event, meeting, training, etc. Those costs would include travel of both prime and consultant personnel, planning and facilitation costs, including all outlays for conference preparation, AV and rental of venue costs, etc. The EPA WACOR will then prepare for approval the internal paperwork for the event and will provide it to the CO. The CO will advise the contractor when appropriate signatures have been obtained. At that point, effort can proceed for the event. If the event is being sponsored by another EPA organization, the organization providing the planning is responsible for the approval.

Any event which meets the definition of a "conference," with total net expenditures greater than \$20,000, is required to submit EPA Electronic Form 5170 and Form 5170-A (with cost estimates/actuals). In the case the workflow system is down and CORs require emergency approval, they can submit EPA Form 5170 (PDF) (2pp, 93K) (with cost estimates) to conference@epa.gov.

IX. SOFTWARE APPLICATION AND ACCESSIBILITY (SECTION 508 REHABILITATION ACT AND AMENDMENTS)

Software Application files, if delivered to the Government, shall conform to the requirements relating to accessibility as detailed to the 1998 amendments to the Rehabilitation Act, particularly, but not limited to, § 1194.21 Software applications and operating systems and § 1194.22 Web-based intranet and internet information and applications. See: <http://www.section508.gov/>

Preferred text format:	MS Word, 2013 or higher (Office 2013 or higher)
Preferred presentation format:	Power Point, Office 2013 or higher

Preferred graphics format:	Each graphic is an individual JPG file, GIF file or Adobe Illustrator format
Preferred portable format:	Adobe Acrobat, version 11.0 or higher
Preferred web application	Drupal 7, SharePoint, ColdFusion, Apex, Oracle

All products delivered under this work assignment will require 508 compliance (unless an exception is made) and will include metadata for websites developed or PDFs posted to the EPA Website per the EPA web guidance standard (see <http://www.epa.gov/webguide>).

X. QUALITY ASSURANCE SURVEILLANCE PLAN

The requirements contained in this WA are considered performance-based, focusing on the Agency's desired results and outcomes. The contractor shall be responsible for determining the most effective means by which these requirements will be fulfilled. In order to fulfill the requirements, the contractor shall design innovative processes and systems that can deliver the required services in a manner that will best meet the Agency's performance objectives. This performance-based requirement represents a challenge to the contractor to develop and apply innovative and efficient approaches for achieving results and meeting or exceeding the performance objectives, measures, and standards in Attachment 4 of the contract. The Contractor's performance will be reflected in the positive or negative evaluation offered by the Agency in the Contractor Performance Evaluation (CPE) which is evaluated annually (per the "Contractor Performance Evaluation" clause in the contract). The WACOR shall submit a complete annual review of the areas outlined in the Quality Assurance Surveillance Plan (QASP), included in Attachment 4 of the contract, which will then be utilized by the Contract Level Contracting Officer's Representative in preparing the overall evaluations submitted annually in response to the Contractor Performance Evaluation requirements in the contract.

EPAUnited States Environmental Protection Agency
Washington, DC 20460**Work Assignment**

Work Assignment Number

01-18

☐ Other☐ Amendment Number:

Contract Number

EP-C-15-012

Contract Period 08/01/2015 To 07/31/2017

Base

Option Period Number 1

Title of Work Assignment/SF Site Name

Impact of Materials Mgmt Appli

Contractor

CSRA LLC

Specify Section and paragraph of Contract SOW

2.2, 2.10, 2.16

Purpose:



Work Assignment



Work Assignment Close-Out



Work Assignment Amendment



Incremental Funding



Work Plan Approval

Period of Performance

From 08/01/2016 To 07/31/2017

Comments:

In accordance with contract clause B.1 EPAAR 1552.211-74 Work Assignments (DEC 2014) ALT III (DEC 2014). Immediate start is authorized for the subject WA. However, if the Work plan is not approved within 35 days of the signed WA the contractor shall stop work under this work assignment.



Superfund

Accounting and Appropriations Data



Non-Superfund

SFO

(Max 2)



Note: To report additional accounting and appropriations data use EPA Form 1900-69A.

Line	DCN (Max 6)	Budget/FY (Max 4)	Appropriation Code (Max 6)	Budget Org/Code (Max 7)	Program Element (Max 9)	Object Class (Max 4)	Amount (Dollars)	(Cents)	Site/Project (Max 8)	Cost Org/Code
1										
2										
3										
4										
5										

Authorized Work Assignment Ceiling

Contract Period:

Cost/Fee:

LOE: 0

08/01/2015 To 07/31/2017

This Action:

5,300

Total:

5,300

Work Plan / Cost Estimate Approvals

Contractor WP Dated:

Cost/Fee

LOE:

Cumulative Approved:

Cost/Fee

LOE:

Work Assignment Manager Name Thabet Tolaymat

Branch/Mail Code:

Phone Number: 513-487-2860

FAX Number:

(Signature)

(Date)

Project Officer Name Nancy Parrotta

Branch/Mail Code:

Phone Number: 202-564-5260

FAX Number:

(Signature)

(Date)

Other Agency Official Name Erin Ridder

Branch/Mail Code:

Phone Number: 513-487-2155

FAX Number:

(Signature)

(Date)

Contracting Official Name Donna Reinhart

Branch/Mail Code:

Phone Number: 513-487-2114

FAX Number:

(Signature)

(Date)

**WORK ASSIGNMENT
PERFORMANCE WORK STATEMENT (PWS)**

Contract No. EP-C-15-012

Work Assignment: WA-01-18

WACOR: **Name:** Thabet Tolaymat
 Branch: Waste Management Branch
 Division: Land Remediation Pollution Control Division
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 Phone: 513-487-2860
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 Mail code: MLK 238
 Street Address: 26 West Martin Luther King Drive
 City, State, Zip: Cincinnati, Ohio, 45268

Alt WACOR: **Name:** Michael Goss
 Branch: Sustainable Environments Branch
 Division: Sustainable Technology Division
 Office: Office of Research and Development
 Phone: 513-569-7163
 FAX: 513-569-7677
 E-mail: goss.michael@epa.gov
 Mail code: 443
 Street Address: 26 West Martin Luther King Drive
 City, State, Zip: Cincinnati, Ohio, 45268

Period of Performance: Award to July 31, 2017

Title: Impact of Materials Management Applications

PWS Sections: 2.2, 2.10, 2.16, 2.4

I. PURPOSE:

The purpose of this work assignment is to evaluate the impact of sustainable materials management on the environment including groundwater. The project will provide information that would enhance US EPA, states and communities to implement decision making with regards to sustainable materials management.

To achieve this purpose the contractor shall be expected to: evaluate secondary data and conduct virtual and in person meetings with key members of the research community.

The intended audience of this project are EPA's Office of Solid Waste and Emergency Response, regional offices and other federal agencies.

This project supports programmatic support needs related to our national all hazards homeland security

responsibilities by: providing data and information that would lead to more accurate accounting of our solid waste management systems and lead to a higher level resiliency in our materials management systems.

Other partners and external offices or agencies which should be included in coordination, and the nature of their involvement, are: EPA's Office of Emergency Response, and EPA Regional Offices

This work assignment supports the mission of the Office of Research and Development Sustainable and Healthy Communities Research as described in the FY16-19 Research Action Plan, which relates resources, activities, outputs, audience, short- and long- term outcomes to EPA's pillars of sustainability. Additionally, this work assignment contributes to the commitments made in EPA's *Strategic Plan: 2011 to 2015*.

In support of these requirements, this contract supports the nation's drinking and wastewater infrastructure, collectively known as the Water Sector, in being informed, coordinated, and prepared to prevent, detect, respond to, and recover from terrorist attack and other intentional acts, natural disasters, and other hazards (referred to as the "all hazards" approach), which may also occur, including the needs and challenges posed by natural disasters, catastrophic events, adaptation and impacts of climate change, floods, earthquakes, pandemic illness, and any other events which impact the safety and availability of our water supply.

In pursuit of these efforts, the contractor may be tasked with preparing a correlation summary comparing the results under this work assignment to the components of the Water Security Strategy framework.

II. BACKGROUND:

Historically, materials management in the United States has been handled through a variety of options that include disposal, recycling, or some form of treatment. Given the increased need to institute waste management practices that are sustainable and acknowledge critical environmental, social, and economic considerations (the three pillars of sustainability, also referred to as the triple bottom line), an examination of well-established as well as emerging waste management methods is warranted to facilitate decision-making.

Regulations that help manage our nation's solid waste stream are almost 30 years old if not more. Since that time a large volume of data was generated on the performance of these facilities and evaluate their containment robustness into the future.

Construction and Demolition (C&D) debris is part of the municipal waste stream and is generated from the construction, renovation, repair, and demolition of structures such as residential and commercial buildings, roads, and bridges. The composition of C&D waste varies for these different activities and structures. Overall, C&D waste is composed mainly of wood products, asphalt, drywall, and masonry; other components often present in significant quantities include metals, plastics, earth, shingles, insulation, and paper and cardboard. It is often disposed of in unlined impoundments with little or no effluent collection system. This management process is becoming more and more unsustainable as effluent from these impoundments is causing groundwater and air contamination. Furthermore, this disposal process is proving to be a disincentive for generators to recycle these types of materials. The research proposed for this work assignment will evaluate emissions from C&D dumpsites and aims at promotion of recyclability and protection of human health and the environment.

III. QA REQUIREMENTS:

Tasks two (2) and three (3) in this WA require direct environmental measurements and/or the use of secondary data. Consistent with the Agency's quality assurance (QA) requirements, the contractor must prepare a complete written Project-Specific Quality Assurance Project Plan (PQAPP) as part of this WA, i.e., none of the QA requirements for this WA are addressed in the Contract Level Quality Assurance Project Plan (QAPP), or there is not Contract Level QAPP; to assure the quality of the data used under this work assignment, and to supplement the approved Quality Management Plan (QMP) of the contract. Work on these tasks cannot proceed until the contractor receives notification of PQAPP approval from the CL COR via e-mail. The project-specific quality assurance requirements must be addressed in the work plan and monthly progress reports as specified under Task 0, below. QAPPs shall conform to EPA requirements for QA Project Plans as defined in "EPA Requirements for Quality Assurance Project Plans" (QA/R-5) (EPA 2001)

IV. DETAILED TASK DESCRIPTION:

All direction under this WA will be provided as written technical direction from the WACOR or Alternate WACOR as appropriate. If provided first as verbal technical direction to the contractor, it will be confirmed in writing within 5 calendar days, with a copy to the Contract Level Contracting Officer's Representative (CL COR) and the Contracting Officer (CO), and is subject to the limitations of the technical direction contract clause. Each initial deliverable shall be provided to the EPA WACOR and EPA CL COR in draft form for review and comment. The contractor shall incorporate WACOR review comments into revisions of the drafts. All drafts and final reports shall be approved by the WACOR.

The contractor shall perform the following tasks:

Task 0: Work Plan, Progress evaluations, and Monthly Progress Reports

The contractor shall develop a work plan that describes how each task will be carried out. The work plan shall include a schedule, staffing plan, level of effort (LOE), and cost estimate for each task, the contractor's key assumptions on which staffing plan and budget are based, and qualifications of proposed staff. If a subcontractor(s) is proposed and subcontractors are outside the metropolitan DC area, the contractor shall include information on plans to manage work and contract costs. The work plan shall also provide an analysis of the existing and projected constraints, and the feasibility of accomplishing the project's purpose.

In addition, the contractor shall prepare a project specific quality assurance plan (PQAPP) (noted above) and ensure the quality of secondary data used to complete these tasks. Work on these tasks cannot proceed until the contractor receives notification of the new PQAPP approval from the CL COR via e-mail. This task also includes monthly progress and financial reports. The monthly progress report shall indicate, in a separate QA section, whether significant QA issues have been identified and how they are being resolved. Monthly financial reports must include a table with the invoice LOE and costs' broken out by the tasks in this WA.

In addition, in each monthly progress report, the contractor shall, at the introduction to the discussion of this WA, discuss actual progress toward achieving the purpose of this WA, , including problems encountered, issues that may need to be resolved, and anticipated timing for completing the goals of the WA. The contractor shall provide an overview of contract projects, striving to implement efficiencies in performance when complimentary requirements are issued. The contractor shall assure that duplication of

effort relative to other ongoing work assignments under this contract is not occurring.

Deliverables: Work plan, PQAPP and monthly progress and financial reports.

Task 1: Programmatic support

The contractor shall provide support for the area of sustainable materials management in terms analysis including the development, editing, and updating as necessary bulletins, advisories, reports, guidance document, fact sheets, and other outreach materials related to the research area. The contractor shall support, assess, summarize and provide reports and project files related to status, strategic planning, cost/benefit and/or economic impact analysis for Sustainable Materials Management initiatives. The number of anticipated initiatives to support is 2.

The contractor shall perform technical peer review of documents and materials related to the topics described in this WA, which were prepared by entities other than the contractor the contractor's team members and consultants. No peer review or review of technical or analytical documents should be undertaken by the contractor on documents, data, or studies contributed to, or completed by the contractor, contractor's team members, or its consultants.

The contractor shall follow all procedures concerning COI and Ethics related to the peer review process outlined in Section 3.4.5 of the EPA's Science Policy Council Handbook on Peer Review, (EPA/100/B-06/002, 3rd Edition) or the most recent rendition of that handbook. The Handbook can be found electronically at the EPA website, https://www.epa.gov/sites/production/files/2015-09/documents/peer_review_handbook_2006_3rd_edition.pdf and should be considered the guidance document for all elements of the peer review process.

The specific processes and responsibilities involved with the Peer Review task include:

- Selecting appropriate subject matter experts as peer reviewers and ensuring that they meet the qualification stipulated in the EPA peer Review Handbook;
- Developing the charge to the peer reviewers;
- Providing peer review support to the reviewers, including literature searches and related document
- The contractor will maintain communication with the reviewers to ensure that the charge is clear and that the work is on schedule. In addition, the contractor will establish appropriate mechanisms to provide compensation to the reviewers.
- Providing logistical and facilitation support to the peer review workshop(s) or meeting(s); transcribing, compiling and distributing all post meeting comments, proceedings, and summaries, the cost of the workshop(s) or meeting(s) shall not exceed \$19,000; and
- Providing a final document to the EPA CL COR/WA COR including comments, alternatives, dissenting views, sources relied upon, and recommendations.

The contractor shall is also expected to schedule five (3) person-trips to update the WACOR and other EPA employees in Cincinnati on the progress of the task.

Deliverables:

1. Programmatic support in the area of sustainable materials management upon the technical direction of the WACOR

Task 2: Long-term performance of Subtitle D landfills

In 2002 the EPA published a report "Assessment and Recommendations for Improving the Performance of Waste Containment Systems" EPA/600/R-02/099. Building on this report, there is a need to generate similar type of data and field performance as it pertains to Subtitle D (municipal solid waste landfills). The contractor shall evaluate the field performance of engineered systems (e.g., liners and covers) for at least ten (10) Subtitle D landfills that are nearing the end 30 years post closure care time regulatory limit. The ten landfill sites will be identified with consultation with the WACOR. This task may involve the contractor traveling to these sites to collect data needed for the completion of the task. The contractor shall evaluate the available information on field performance of these landfills, collect and analyze liquid management data for Subtitle D landfills, Evaluate problems that have occurred in these systems and assess the adequacy of EPA HELP model as a predictor of head on the liner and the LandGEM model as a predictor of gas generation at these sites.

Specifically the EPA is trying to answer the following questions:

- 1) Engineered Systems
 - a) What is the nature, frequency and significance of identified problems in liner system?
 - i) Perimeter well monitoring
 - ii) Contaminants migration off site
 - b) What conclusions can be drawn from available leachate collection system hydraulic efficiencies of liners?
 - c) What is the nature, frequency and significance of identified problems in the final cover systems at these facilities?
 - i) Generic subtitle D prescribed covers
 - ii) Exposed geo-membrane covers
 - iii) Evapo-transpiration covers
 - iv) Others
 - d) What is the nature, frequency and significance of identified problems in the gas collection and management system?
- 2) Leachate Generation and Collection:
 - a) Volume of leachate generated by closed Subtitle D landfills and the effects of site location (climatic region) and waste type on leachate generation rates?
 - b) What are the trends observed with leachate generation volume?
 - c) What is the leachate chemistry at these sites?
 - d) How the leachate generation rates using the EPA's HELP model compares to actual leachate generation rates at the site?
- 3) Landfill Gas Generation and Collection
 - a) Volume of gas generation by closed Subtitle D landfills and the effects of site location (climatic region) and waste type on gas generation rates?
 - b) What are the trends observed with gas generation volume?
 - c) What is the landfill gas composition at these sites?
 - d) How the gas generation using EPA's LandGEM model compares to actual gas generation rates at the site?
- 4) Settlement
 - a) Landfill settlement
 - b) Bottom liner settlement
- 5) What are the financial cost of post closure care?
 - a) Cost of upkeep (regular maintenance)
 - b) Cost of sampling, data collection and management
 - c) Engineering support

As part of this task, the contractor is expected to make no more than ten (2) person-trips for site visits. The contractor shall also be expected to schedule five (3) person-trips to update the WACOR and other EPA employees in Cincinnati on the progress of the task.

Deliverables:

Final Draft Report long-term performance of subtitle D landfills: data collection and site visits should start within a four (4) weeks of QA approval; first draft report is due to the EPA 9 months after WA approval.

Task 3: Final Report on the Workshop on Urban Sustainability Assessment and Management

The Contractor shall compile a report on the workshop on Urban Sustainability Assessment and Management that contains:

- a) List of Presenters. The Contractor shall prepare a speakers list and participants list to incorporate into the final report.
- b) Executive Summary. The executive summary will be developed based on the submitted abstracts and final speaker PowerPoint presentations. The executive summary is expected to capture the key points of the meeting's presentations.
- c) Summary of Discussions. The summary is expected to capture the key points of each group discussion that took place.
- d) Abstracts. The Contractor will compile the abstracts in the final report, but will not edit or format the abstracts.
- e) Summary of Important Results and Findings. The Contractor shall prepare summaries of important results and findings into the final report.
- f) Disposition of Funds. The Contractor shall include in the final report a description of the funds disposed, which will be categorized by task. The budget will detail the labor hours and costs for the travel of the facilitators and experts as well as communications costs inclusive of any courier service, such as FedEx/UPS, telephone, fax, mail and so forth.

V. SCHEDULE/DELIVERABLES

- 1. Work plan: In accordance with contract terms
- 2. QAPP(s): Three (3) weeks after TD work plan approval, edits, amendments will occur as the WA needs and requested by the WAOR
- 3. Progress reports: Delivered to WACOR monthly
- 4. Progress meetings: Conducted with the WACOR monthly
- 5. Final Report on the Workshop on Urban Sustainability Assessment due to EPA 45 days after receiving SOW
- 6. Report long-term performance of subtitle D landfills: data collection and site visits should start within a four (4) weeks of WA approval; final draft report is due to the EPA 09 months after WA approval.
- 7. Programmatic support in the area of SMM upon the technical direction by the EPA WACOR

VI. REPORTING REQUIREMENTS

1. Monthly Progress Reports (including a progress evaluation discussion)
2. Monthly Financial Reports
3. Development and or update Project Specific PQAPP for task 1 and 2
4. Reports requested by the WACOR under task 1 of this WA
5. Final Draft Report "long-term performance of subtitle D landfills"
6. Final Report on the Workshop on Urban Sustainability Assessment

VII. GREEN MEETINGS AND CONFERENCES

The contractor shall follow the provision of EPA prescription 1523.703-1, *Acquisition of environmentally preferable meeting and conference services (May 2007)*, for the use of off-site commercial facilities for an EPA event, whether the event is a meeting, conference, training session, or other purpose. Environmental preferability is defined at FAR 2.101, and shall be used when soliciting quotes or offers for meeting/conference services on behalf of the Agency.

VIII. CONFERENCES AND WORKSHOPS

The contractor shall immediately alert the WACOR to any anticipated event under the work assignment which may result in incurring an estimated \$20,000 or more cost, funded by EPA, specific to that event, meeting, training, etc. Those costs would include travel of both prime and consultant personnel, planning and facilitation costs, including all outlays for conference preparation, AV and rental of venue costs, etc. The EPA WACOR will then prepare for approval the internal paperwork for the event and will provide it to the CO. The CO will advise the contractor when appropriate signatures have been obtained. At that point, effort can proceed for the event. If the event is being sponsored by another EPA organization, the organization providing the planning is responsible for the approval.

Any event which meets the definition of a "conference," with total net expenditures greater than \$20,000, is required to submit EPA Electronic Form 5170 and Form 5170-A (with cost estimates/actuals). In the case the workflow system is down and CORs require emergency approval, they can submit EPA Form 5170 (PDF) (2pp, 93K) (with cost estimates) to conference@epa.gov.

IX. SOFTWARE APPLICATION AND ACCESSIBILITY (SECTION 508 REHABILITATION ACT AND AMENDMENTS)

Software Application files, if delivered to the Government, shall conform to the requirements relating to accessibility as detailed to the 1998 amendments to the Rehabilitation Act, particularly, but not limited to, § 1194.21 Software applications and operating systems and § 1194.22 Web-based intranet and internet information and applications. See: <http://www.section508.gov/>

Preferred text format:	MS Word, 8.0 or higher (Office 2007 or higher)
Preferred presentation format:	Power Point, Office 2007 or higher
Preferred graphics format:	Each graphic is an individual GIF file
Preferred portable format:	Adobe Acrobat, version 6.0

The WACOR shall identify which of delivered products will require 508 compliance.

QUALITY ASSURANCE SURVEILLANCE PLAN
for WSD's Mission Support

Quality Assurance Surveillance Plan

The requirements contained in this WA are considered performance-based, focusing on the Agency's desired results and outcomes. The contractor shall be responsible for determining the most effective means by which these requirements will be fulfilled. In order to fulfill the requirements, the contractor shall design innovative processes and systems that can deliver the required services in a manner that will best meet the Agency's performance objectives. This performance-based requirement represents a challenge to the contractor to develop and apply innovative and efficient approaches for achieving results and meeting or exceeding the performance objectives, measures, and standards described below. The Contractor's performance will be reflected in the positive or negative evaluation offered by the Agency in the Contractor Performance Evaluation (CPE) which is evaluated annually (per the "Contractor Performance Evaluation" clause in the contract). The WACOR shall submit a complete annual review of the areas outlined in the Quality Assurance Surveillance Plan (QASP), included in the contract, which will then be utilized by the Project Officer in preparing the overall evaluations submitted annually in response to the Contractor Performance Evaluation requirements in the contract.

EPAUnited States Environmental Protection Agency
Washington, DC 20460**Work Assignment**

Work Assignment Number

01-19

☐

Other

☐

Amendment Number:

Contract Number

EP-C-15-012

Contract Period 08/01/2015 To 07/31/2017

Base

Option Period Number 1

Title of Work Assignment/SF Site Name

C&D Life Cycle Inventory

Contractor

CSC GOVERNMENT SOLUTIONS LLC

Specify Section and paragraph of Contract SOW

2.10, 3.1.3, 3.15, 3.1.16, 3.17

Purpose:

☒

Work Assignment

☐

Work Assignment Close-Out

☐

Work Assignment Amendment

☐

Incremental Funding

☐

Work Plan Approval

Period of Performance

From 08/01/2016 To 07/31/2017

Comments:

In accordance with contract clause B.1 EPAAR 1552.211-74 Work Assignments (DEC 2014) Alternate III (DEC 2014) paragraph (c) CSC is not authorized to start work without an approved workplan for this work assignment 01-19.

☐

Superfund

Accounting and Appropriations Data

☒

Non-Superfund

SFO

(Max 2)

☐

Note: To report additional accounting and appropriations data use EPA Form 1900-69A.

Line	DCN (Max 6)	Budget/FY (Max 4)	Appropriation Code (Max 6)	Budget Org/Code (Max 7)	Program Element (Max 9)	Object Class (Max 4)	Amount (Dollars)	(Cents)	Site/Project (Max 8)	Cost Org/Code
1										
2										
3										
4										
5										

Authorized Work Assignment Ceiling

Contract Period:

Cost/Fee:

LOE:

08/01/2015 To 07/31/2017

This Action:

Total:

Work Plan / Cost Estimate Approvals

Contractor WP Dated:

Cost/Fee

LOE:

Cumulative Approved:

Cost/Fee

LOE:

Work Assignment Manager Name David Meyer

Branch/Mail Code:

Phone Number: 513-569-7194

FAX Number:

(Signature)

(Date)

Project Officer Name Nancy Parrotta

Branch/Mail Code:

Phone Number: 202-564-5260

FAX Number:

(Signature)

(Date)

Other Agency Official Name

Branch/Mail Code:

Phone Number:

FAX Number:

(Signature)

(Date)

Contracting Official Name Donna Reinhart

Branch/Mail Code:

Phone Number: 513-487-2114

FAX Number:

(Signature)

(Date)

**WORK ASSIGNMENT (WA)
PERFORMANCE WORK STATEMENT (PWS)**

Contract No. EP-C-15-012

Work Assignment: WA-01-19

WACOR: **Name:** David E. Meyer
 Branch: Systems Analysis Branch
 Division: Sustainable Technology Division
 Office: AWBERC 470B
 Phone: 513-569-7194
 FAX: - - -
 E-mail: meyer.david@epa.gov
 Mail code: AWBERC 483
 Street Address: 26 W. Martin Luther King Dr.
 City, State, Zip: Cincinnati, OH 45268

Alt WACOR: **Name:** George Moore
 Branch: Green Chemistry Branch
 Division: Sustainable Technology Division
 Office: AWBERC 468B
 Phone: 513-569-7991
 FAX: - - -
 E-mail: moore.george@epa.gov
 Mail code: AWBERC 483
 Street Address: 26 W. Martin Luther King Dr.
 City, State, Zip: Cincinnati, OH 45268

Task Manager:

Name: Briana Niblick
 Branch: Systems Analysis Branch
 Division: Sustainable Technology Division
 Office: AWBERC 437B
 Phone: 513-569-7732
 FAX: - - -
 E-mail: niblick.briana@epa.gov
 Mail code: AWBERC 483
 Street Address: 26 W. Martin Luther King Dr.
 City, State, Zip: Cincinnati, OH 45268

Period of Performance: August 1, 2016 to July 31, 2017

Title: Construction and Demolition (C&D) Life Cycle Inventory (LCI)

PWS Sections: 2.10, 3.1.3, 3.1.15, 3.1.16, 3.1.17

I. PURPOSE:

As communities seek to become more sustainable, they are faced with decisions surrounding waste collection and disposal, transportation options, land use planning, and infrastructure needs, all of which can affect climate change and water resources. These decisions are made with the understanding that effective and sustainable environmental protection is linked to human health and quality-of-life, economic opportunity, and community vitality. For example, the processing and production of materials in these communities provide economic opportunity, but also represent sources of environmental emissions. Furthermore, there is a recognized environmental justice component to sustainable materials management (SMM): minority populations and/or low-income populations bear a disproportionate amount of adverse health and environmental effects associated with the life cycle of the materials of commerce – from resource extraction, material processing/production, transportation, use, recycling, and on to ultimate disposal/destruction. In order to conserve land, minimize land contamination, minimize emissions to air and water, and yield equitable co-benefits throughout a community, materials must be produced efficiently, their application reduced, reused, recycled, and their disposal/management focused on a life cycle basis while preserving their function. The Life Cycle and Decision Support Branch within the National Risk Management Research Laboratory (NRMRL) of US EPA's Office of Research and Development (ORD) is developing the necessary tools to support the use of life cycle assessment (LCA) by the Office of Land and Emergency Management (OLEM), the Office of Water (OW), the Office of Air and Radiation (OAR), and Regional Offices to promote SMM within states and communities.

The purpose of this work assignment is to develop and refine life cycle inventories (LCIs) for selected construction and demolition (C&D) materials that may be applied in the Agency's LCA tools. To achieve this purpose the contractor shall be expected to perform the following types of activities under the direction of the EPA WACOR: 1. update national material flow estimates, 2. model material life cycles and compile LCIs using the provided templates, 3. update the model documentation in the form of a report update, and 4. revise the LCIs based on feedback from external reviews (reviews organized and coordinated by EPA). The intended audience for this project is anyone interested in incorporating LCA into their decision making process to support SMM. This project supports programmatic support needs related to our national all hazards homeland security responsibilities by enabling decision makers to consider how to use the nation's natural resources and materials, including water, in a manner that is safe and sustainable.

II. BACKGROUND:

Under contract EP-C-15-012, WA-00-19, EPA worked with the contractor to develop life cycle inventory data for selected C&D materials and management practices. These materials represent a significant portion of material flows in the United States and can lead to environmental impacts to water and air, including climate change, through life cycle emissions. The inventory modeling work needs to be continued and expanded to include new materials and their respective end-of-life management pathways. The resulting LCIs will serve as a refined baseline for current C&D management practices in the US that can be used in policy development to promote sustainable management of these materials by states and communities.

III. QA REQUIREMENTS:

Task(s) 1 through 4 in this WA require the use of primary and/or secondary data, as did Tasks 1 through 6 of WA 00-19. Consistent with the Agency's Quality Assurance (QA) requirements, the contractor prepared a Project Specific Quality Assurance Project Plan (PQAPP) for WA 00-19. Since no significant changes in data collection are expected between WA 00-19 and WA 01-19, the PQAPP for WA 00-19, G-STD-0021498-QP-1-0, approved 10/05/2015, shall be used for WA 01-19.

IV. DETAILED TASK DESCRIPTION:

All direction under this WA will be provided as written technical direction from the WACOR or Alternate WACOR, as appropriate. If provided first as verbal technical direction to the contractor, it will be confirmed in writing within five calendar days, with a copy to the CL COR and the Contracting Officer (CO), and is subject to the limitations of the technical direction contract clause. Each initial deliverable shall be provided to the EPA WACOR in draft form for review and comment. The contractor shall incorporate review comments into revisions of the drafts. All drafts and final reports shall be approved by the WACOR.

The contractor shall perform the following tasks:

Task 0: Work Plan (WP), Progress Evaluations, and Monthly Progress Reports

The contractor shall develop a WP that describes how each task will be carried out. The work plan shall include a schedule, staffing plan, level of effort (LOE), and cost estimate for each task, the contractor's key assumptions on which staffing plan and budget are based, and qualifications of proposed staff. In addition, the work plan shall include the requirement that all electronic and information technology (EIT) and all EIT deliverables be Section 508 compliant in accordance with the policies referenced at <http://www.epa.gov/accessibility/>. If a subcontractor(s) is proposed and subcontractors are outside the local metropolitan area, the contractor shall include information on plans to manage work and contract costs.

In addition, the contractor shall use the PQAPP prepared under Contract EP-C-15-012 for WA 00-19, as noted above, and ensure the quality of primary and/or secondary data used to complete these tasks.

The monthly progress report shall indicate, in a separate QA section, whether significant QA issues have been identified and how they are being resolved.

In each monthly progress report, the contractor shall, at the introduction to the discussion of this WA, discuss actual progress toward achieving the purpose of this work assignment, including problems encountered, issues that may need to be resolved, and anticipated timing for completing the goals of the WA. The contractor shall provide an overview of contract projects, striving to implement efficiencies in performance when complementary requirements are issued. The contractor shall assure that duplication of effort relative to other ongoing WAs under this contract is not occurring.

Deliverables: Work plan, monthly progress and financial reports.

Task 1 – Revised quantitative estimates of C&D material treatment and recovery by pathway

Under WA 00-19 of Contract EP-C-15-012, contractors prepared a dataset of national material flow estimates along with a draft methodology describing treatment pathways and recovery percentages for each material included in the analysis. The contractor shall now update this dataset with the most recent data available, including ranges for all data estimates and explanations of data gaps to be considered when applying and interpreting the data.

Deliverable: an updated dataset of material flow estimates in a format specified by the WACOR.

Task 2 – Life Cycle Inventory Modeling and Unit Process Template Preparation

Using the LCI inventory submission procedures outlined by the WACOR and documented in the methodology chapter of the LCI report in Task 3, the contractor shall revise all material and pathway LCIs specified by the WACOR to ensure consistency and data quality. The contractor shall evaluate how likely new materials in WA 01-19 will result in leaching in a landfill. As directed by the WACOR, the contractor shall use a generic model for materials determined to have negligible leachate generation. Otherwise, the contractor shall use leaching rates and emissions appropriate for each material.

The contractor shall model the following materials:

- Copper wire
- Clay brick
- Polyvinyl chloride (PVC)
- Fiberglass insulation
- Vinyl composition tile (VCT)
- Carpet and padding

The contractor shall model the following pathways for the applicable materials:

- MSW landfill
- C&D landfill
- Mixed C&D processing facility

- Site application (e.g. soil fill)
- Incineration (e.g. PVC)

The WACOR may name other materials and pathways to be modeled if deemed necessary to complete the C&D dataset. All datasets submitted under this task shall be designated as "Draft." The WACOR shall approve the set of Draft inventories, which will then be externally reviewed for finalization in Task 4.

Deliverable: Draft C&D LCI.

Task 3 – Updates to Life Cycle Inventory Report

Under contract EP-C-15-012, WA 00-19, the contractor prepared a report describing the LCIs of all materials and treatment pathways specified by the WACOR. The contractor shall update the report with the new materials included in WA 01-19 in a manner consistent with the existing report.

Deliverable: Update to the C&D LCI report written under WA 00-19 to include documentation for all materials specified by the WACOR in WA 01-19.

Task 4 – LCI Finalization based on Reviewer Feedback

The LCI datasets submitted in Task 3 will undergo external review, coordinated by EPA's Life Cycle Assessment Research Center. When the datasets return from review, the contractor shall revise each dataset and documentation, based on the external feedback received and as directed by the WACOR/TM. The revised datasets will be designated as "Final" and submitted to the WACOR for approval.

The contractor shall complete this post-reviewer revision process for all LCIs under WA 01-19, as well as for any LCIs reviewed under WA 00-19 still requiring revision, as specified by the WACOR.

Deliverable: Final C&D LCIs incorporating external reviewer feedback for new materials modeled under WA 01-19.

Deliverable: Final C&D LCIs incorporating external reviewer feedback for materials modeled previously under WA 00-19.

V. SCHEDULE/DELIVERABLES TABLE

Task	Deliverable	Deliverable Due Date
0	Work Plan	According to Contract
0	Monthly Progress Report	According to Contract
1	Updated material flow datasets	June 30, 2017

Task	Deliverable	Deliverable Due Date
2	Draft C&D LCIs	March 31, 2017
3	Updated C&D LCI Report	May 31, 2017
4	Final C&D LCI for WA 01-19	July 31, 2017
4	Final C&D LCI for WA 00-19	July 31, 2017

VI. REPORTING REQUIREMENTS

Monthly Progress Reports (including a progress evaluation discussion)

Financial Reports

VII. GREEN MEETINGS AND CONFERENCES

The contractor shall follow the provision of EPA prescription 1523.703-1, *Acquisition of environmentally preferable meeting and conference services (May 2007)*, for the use of off-site commercial facilities for an EPA event, whether the event is a meeting, conference, training session, or other purpose. Environmental preferability is defined at FAR 2.101, and shall be used when soliciting quotes or offers for meeting/conference services on behalf of the Agency.

VIII. CONFERENCES AND WORKSHOPS

The tasks under this work assignment do not require the acquisition of "off-site" facilities for conferences and meetings as defined in the IPN 12-05. IN ADDITION, the events associated with this work assignment are not covered by EPA Order 1900.3 and do not require EPA Form 5170.

The contractor shall immediately alert the WACOR to any anticipated event under the work assignment which may result in incurring an estimated \$20,000 or more cost, funded by EPA, specific to that event, meeting, training, etc. Those costs would include travel of both prime and consultant personnel, planning and facilitation costs, AV and rental of venue costs, etc. The EPA WACOR will then prepare for approval the internal paperwork for the event and will advise the contractor when appropriate signatures have been obtained. At that point, effort can proceed for the event. If the event is being sponsored by another EPA organization, the organization providing the planning is responsible for the approval.

Any event which meets the definition of a "conference," with total net expenditures greater than \$20,000, is required to submit EPA Electronic Form 5170 and Form 5170-A (with cost estimates/actuals). In the case the workflow system is down and CORs require emergency approval, they can submit EPA Form 5170 (PDF) (2pp, 93K) (with cost estimates) to conference@epa.gov.

IX. SOFTWARE APPLICATION AND ACCESSIBILITY (SECTION 508 REHABILITATION ACT AND AMENDMENTS)

Software Application files, if delivered to the Government, shall conform to the requirements relating to accessibility as detailed to the 1998 amendments to the Rehabilitation Act, particularly, but not limited to, § 1194.21 Software applications and operating systems and § 1194.22 Web-based intranet and internet information and applications. See: <http://www.section508.gov/>

Preferred text format:	MS Word, 8.0 or higher (Office 2007 or higher)
Preferred presentation format:	Power Point, Office 2007 or higher
Preferred graphics format:	Each graphic is an individual GIF file
Preferred portable format:	Adobe Acrobat, version 6.0

The WACOR shall identify which of delivered products will require 508 compliance.

QUALITY ASSURANCE SURVEILLANCE PLAN
For WSD's Mission Support

Quality Assurance Surveillance Plan

The requirements contained in this WA are considered performance-based, focusing on the Agency's desired results and outcomes. The contractor shall be responsible for determining the most effective means by which these requirements will be fulfilled. In order to fulfill the requirements, the contractor shall design innovative processes and systems that can deliver the required services in a manner that will best meet the Agency's performance objectives. This performance-based requirement represents a challenge to the contractor to develop and apply innovative and efficient approaches for achieving results and meeting or exceeding the performance objectives, measures, and standards in Attachment 4 of the contract. The Contractor's performance will be reflected in the positive or negative evaluation offered by the Agency in the Contractor Performance Evaluation (CPE), which is evaluated annually (per the "Contractor Performance Evaluation" clause in the contract). The WACOR shall submit a complete annual review of the areas outlined in the Quality Assurance Surveillance Plan (QASP), included in the contract, which will then be utilized by the CLCOR in preparing the overall evaluations submitted annually in response to the Contractor Performance Evaluation requirements in the contract.

EPAUnited States Environmental Protection Agency
Washington, DC 20460**Work Assignment**

Work Assignment Number

01-19

☐ Other☒ Amendment Number:

000001

Contract Number

EP-C-15-012

Contract Period 08/01/2015 To 07/31/2017

Base

Option Period Number 1

Title of Work Assignment/SF Site Name

C & D Life Cycle Inventory

Contractor

CSRA LLC

Specify Section and paragraph of Contract SOW

2.10, 3.1.3, 3.15, 3.1.16, 3.17

Purpose:

☐

Work Assignment

☐

Work Assignment Close-Out

☒

Work Assignment Amendment

☐

Incremental Funding

☐

Work Plan Approval

Period of Performance

From 10/19/2016 To 07/31/2017

Comments:

The purpose of this amendment 1 to CSRA (EP-C-15-012) WA 01-19 is to reduce the scope of work and to clarify tasks.

☐

Superfund

Accounting and Appropriations Data

☒

Non-Superfund

SFO

(Max 2)

☐

Note: To report additional accounting and appropriations data use EPA Form 1900-69A.

Line	DCN (Max 6)	Budget/FY (Max 4)	Appropriation Code (Max 6)	Budget Org/Code (Max 7)	Program Element (Max 9)	Object Class (Max 4)	Amount (Dollars)	(Cents)	Site/Project (Max 8)	Cost Org/Code
1										
2										
3										
4										
5										

Authorized Work Assignment Ceiling

Contract Period:

Cost/Fee:

LOE:

08/01/2015 To 07/31/2017

This Action:

Total:

Work Plan / Cost Estimate Approvals

Contractor WP Dated:

Cost/Fee

LOE:

Cumulative Approved:

Cost/Fee

LOE:

Work Assignment Manager Name David Meyer

Branch/Mail Code:

Phone Number: 513-569-7194

FAX Number:

(Signature)

(Date)

Project Officer Name Nancy Parrotta

Branch/Mail Code:

Phone Number: 202-564-5260

FAX Number:

(Signature)

(Date)

Other Agency Official Name Erin Ridder

Branch/Mail Code:

Phone Number: 513-487-2155

FAX Number:

(Signature)

(Date)

Contracting Official Name Donna Reinhart

Branch/Mail Code:

Phone Number: 513-487-2114

FAX Number:

(Signature)

(Date)

EPAUnited States Environmental Protection Agency
Washington, DC 20460**Work Assignment**

Work Assignment Number

01-20

☐ Other ☐ Amendment Number:Contract Number
EP-C-15-012

Contract Period 08/01/2015 To 07/31/2017

Title of Work Assignment/SF Site Name

Sustainable Materials Mgmt GA

Contractor
CSC GOVERNMENT SOLUTIONS LLC

Specify Section and paragraph of Contract SOW

2.10, 3.1.3, 3.1.15, 3.1.16, 3.1.17, 3.16

Purpose: ☒ Work Assignment☐ Work Assignment Close-Out☐ Work Assignment Amendment☐ Incremental Funding☐ Work Plan Approval

Period of Performance

From 08/01/2016 To 07/31/2017

Comments:

In accordance with contract clause B.1 EPAAR 1552.211-74 Work Assignments. (DEC 2014)-Alternate III (DEC 2014) paragraph (c) the WA is authorized for IMMEDIATE START on August 1, 2016.

☐ Superfund

Accounting and Appropriations Data

☒ Non-SuperfundSFO
(Max 2)

Note: To report additional accounting and appropriations data use EPA Form 1900-69A.

Line	DCN (Max 6)	Budget/FY (Max 4)	Appropriation Code (Max 6)	Budget Org/Code (Max 7)	Program Element (Max 9)	Object Class (Max 4)	Amount (Dollars)	(Cents)	Site/Project (Max 8)	Cost Org/Code
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Authorized Work Assignment Ceiling

Contract Period:

Cost/Fee:

LOE:

08/01/2015 To 07/31/2017

This Action:

Total:

Work Plan / Cost Estimate Approvals

Contractor WP Dated:

Cost/Fee

LOE:

Cumulative Approved:

Cost/Fee

LOE:

Work Assignment Manager Name David Meyer

Branch/Mail Code:

Phone Number: 513-569-7194

FAX Number:

(Signature)

(Date)

Project Officer Name Nancy Parrotta

Branch/Mail Code:

Phone Number: 202-564-5260

FAX Number:

(Signature)

(Date)

Other Agency Official Name

Branch/Mail Code:

Phone Number:

FAX Number:

(Signature)

(Date)

Contracting Official Name Donna Reinhart

Branch/Mail Code:

Phone Number: 513-487-2114

FAX Number:

(Signature)

(Date)

**WORK ASSIGNMENT (WA)
PERFORMANCE WORK STATEMENT (PWS)**

Contract No. EP-C-15-012

Work Assignment: WA-01-20

WACOR: **Name:** David E. Meyer
 Branch: System Analysis Branch
 Division: Sustainable Technology Division
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Task Manager:

Name: Wesley Ingwersen
 Branch: System Analysis Branch
 Division: Sustainable Technology Division
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 FAX: - -
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 Street Address: 26 W. Martin Luther King Dr.
 City, State, Zip: Cincinnati, OH 45268

Period of Performance: August 1, 2016 to July 31, 2017

Title: Sustainable Materials Management (SMM) Georgia (GA) Pilot Pilot

PWS Sections: 2.10, 3.1.3, 3.1.15, 3.1.16, 3.1.17, 3.16

I. PURPOSE:

As communities seek to become more sustainable, they are faced with decisions surrounding waste collection and disposal, transportation options, land use planning, and infrastructure needs, all of which can affect climate change and water resources. These decisions are made with the understanding that effective and sustainable environmental protection is linked to human health and quality-of-life, economic opportunity, and community vitality. For example, the processing and production of materials in these communities provide economic opportunity, but also represent sources of environmental emissions. Further, there is a recognized environmental justice component to sustainable materials management (SMM): minority populations and/or low-income populations bear a disproportionate amount of adverse health and environmental effects associated with the life cycle of the materials of commerce – from resource extraction, material processing/production, transportation, use, recycling, and on to ultimate disposal/destruction. In order to conserve land, minimize land contamination, minimize emissions to air and water, and yield equitable co-benefits throughout a community, materials must be extracted, manufactured and used effectively and efficiently, their application reduced, reused, recycled, and their disposal/management focused on a life cycle basis while preserving their function. The Systems Analysis Branch (SAB) within the National Risk Management Research Laboratory (NRMRL) of US EPA's Office of Research and Development (ORD) is developing the necessary models and tools to support the use of life cycle assessment (LCA) by the Office of Solid Waste and Emergency Response (OSWER), the Office of Water (OW), the Office of Air and Radiation (OAR), and Regional Offices to promote SMM within states and communities.

The purpose of this work assignment is to continue to develop and document models and the non-expert tool, Sustainable Materials Management Prioritization Tool (SMM Tool). The intended audience for this project is anyone interested in incorporating LCA into their decision making process to support SMM. This project supports programmatic support needs related to our national all hazards homeland security responsibilities by enabling decision makers to consider how to use the nation's natural resources and materials, including water, in a manner that is safe and sustainable.

II. BACKGROUND:

The public and private sectors, domestically and internationally are in the midst of a transition toward decision-making based on holistic sustainability considerations. The scientific foundations required to support those considerations will need to overcome our present artificial compartmental constructs to enable cross-discipline, cross-origin merging of information. In the report Sustainable Materials

Management: The Road Ahead, EPA provided a definition for sustainable materials management (SMM) which transcends historical lenses based on single impact, single life-stage (e.g., use, waste), political boundaries, or efficiency. The report also included a life-cycle assessment of the US consumption of goods and services to serve as an analytical framework for SMM. A draft life cycle based tool, the SMM Tool, was developed based on that framework to provide a faster, easier, and less costly way to incorporate life cycle information in decision-making, setting priorities, and engaging in strategic, system-level dialogue. This tool was migrated into the openLCA environment by ORD in the contract EP-12-C-000094. In the previous period of performance for this work assignment (WA-00-20), a new environmentally-extending input output LCA model for the US (USEEIO), and a multi-regional model for the state of GA and rest of US (GA-USEEIO) was developed, and a Python script called the IO Model Builder was created to import this model into the openLCA environment, such that it could be used with openLCA or the SMM Tool.

III. QA REQUIREMENTS:

Task(s) 1 through 5 in this WA require the use of primary and/or secondary data and the development of software, as did work performed under WA 00-20. Consistent with the Agency's Quality Assurance (QA) requirements, the contractor prepared a Project Specific Quality Assurance Project Plan (PQAPP) for WA 00-20. Since no significant changes in data collection are expected between WA 00-20 and WA 01-20, the PQAPP for WA 00-20, G-STD-0030017-QP-1-0, approved 09/22/2015, shall be used for WA 01-20.

IV. DETAILED TASK DESCRIPTION:

All direction under this WA will be provided as written technical direction from the WACOR, Alternate WACOR, or Task Manager (TM), as appropriate. If provided first as verbal technical direction to the contractor, it will be confirmed in writing within 5 calendar days, with a copy to the CL COR and the Contracting Officer (CO), and is subject to the limitations of the technical direction contract clause. Each initial deliverable shall be provided to the EPA WACOR in draft form for review and comment. The contractor shall incorporate WACOR/TM review comments into revisions of the drafts. All drafts and final reports shall be approved by the WACOR.

The contractor shall perform the following tasks:

Task 0: Work Plan (WP), Progress Evaluations, and Monthly Progress Reports

The contractor shall develop a WP that describes how each task will be carried out. The work plan shall include a schedule, staffing plan, level of effort (LOE), and cost estimate for each task, the contractor's key assumptions on which staffing plan and budget are based, and qualifications of proposed staff. In addition, the work plan shall include the requirement that all electronic and information technology (EIT) and all EIT deliverables be Section 508 compliant in accordance with the policies referenced at <http://www.epa.gov/accessibility/>. If a subcontractor(s) is proposed and subcontractors are outside the

local metropolitan area, the contractor shall include information on plans to manage work and contract costs.

In addition, the contractor shall use the PQAPP prepared under Contract EP-C-15-012 for WA 00-20, as noted above, and ensure the quality of primary and/or secondary data and any software developed to complete these tasks. The monthly progress report shall indicate, in a separate QA section, whether significant QA issues have been identified and how they are being resolved.

In each monthly progress report, the contractor shall, at the introduction to the discussion of this WA, discuss actual progress toward achieving the purpose of this work assignment, including problems encountered, issues that may need to be resolved, and anticipated timing for completing the goals of the WA. The contractor shall provide an overview of contract projects, striving to implement efficiencies in performance when complimentary requirements are issued. The contractor shall assure that duplication of effort relative to other ongoing WA under this contract is not occurring.

Deliverables: Work plan, monthly progress and financial reports, and a revised PQAPP if required, containing the requirements and format specified by the WACOR.

Task 1 – USEEIO and GA-USEEIO model updates

The USEEIO and GA-USEEIO are extended environmentally-models were first developed under the previous period of performance in this work assignment. This task is reserved to make additional updates to those models. These updates may include:

- Updates based on peer-review feedback
- Updates to the underlying economic accounts based on updated BEA and US Census data
- Updates to the environmental satellite accounts based on updated or newly identified sources of environmental data
- Incorporation of new satellite tables for additional environmental resources/emissions
- Updates to the allocation procedures used for individual dataset and full model calculation
- Improved description of model data quality in the metadata
- Hybridization of the IO models with process data for selected sectors/activities
- Incorporation of improved state consumption data
- Addition of uncertainty ranges for satellite table and economic transaction data
- Improved documentation of the model

The specific updates will be specified by the WACOR/TM. For the environmental satellite table updates, the contractor should consult with the WACOR/TM regarding usage of linked open data versions of these sources. In support of this work, the contractor, as directed by the WACOR, shall be authorized to travel and meet face-to-face at USEPA's Cincinnati facility. The number of face-to-face meetings shall be no more than two (2) during the period of performance.

Product: Updated USEEIO and GA-USEEIO models and documentation in a format to be specified by

the WACOR and TM

Task 2 – Incorporation of use phase models and data in USEEIO

USEEIO does not currently incorporate impacts related to consumer use of products. Data for energy use comes from a variety of sources and data for a whole category of products is often represented by only one device. In other cases, unqualified estimates are used. For energy use, more comprehensive and better energy use data needs to be incorporated. Data to support characterization of other use phase impacts also need to be included in the use phase dataset, particularly water use, indoor (e.g. VOCs from furniture) and outdoor air emissions (e.g. residential HVAC emissions, personal vehicle emissions). The contractor shall compile use phase data from open source data sources for final outputs from sectors in the IO model as directed by the WACOR or TM. Data sources to be initially considered shall include, but are not limited to, EPA EnergyStar data for energy use, EPA's CPCat for indoor air emissions, and EPA MOVES for outdoor air emissions associated with vehicle and mobile equipment combustion. Other potential sources shall include non-government organizations focused on consumer protection and manufacturer's product literature. The contractor shall incorporate a draft use phase dataset into the IO model and work with the WACOR and TM to evaluate and finalize the model.

Product: Use phase datasets for USEEIO

Task 3 – Incorporation of end-of-life phase models and data in USEEIO

The USEEIO model is not able to differentiate the treatment and impacts of secondary materials from industry or consumers during end-of-life. In this task, the contractor shall evaluate options for inclusion of secondary materials data, and proceed to develop and integrate the option(s) decided on by the WACOR/TM. Secondary materials types should include non-hazardous MSW, Hazardous waste and other industrial and agricultural waste. Options of data sources to be considered should include, at a minimum:

- A waste input-output (WIO) model developed by ORCR
- EPA WARM openLCA
- EPA LCI for CDD and MSW
- RCRAInfo and TRI data for hazardous waste generation and management
- E-waste tracking model within the SHC 3.6.3 project
- Chemical solvents from EPA GEMM

Product: End-of-life phase datasets for USEEIO

Task 4 – Enhanced Functionality for the SMM Tool and IO Model Builder Script

This task includes enhancements to the openLCA-based SMM Prioritization Tool and associated IO Model Builder python script. As directed by the WACOR or TM, the contractor shall build functionality into the latest beta version of the SMM Tool to perform advanced scenario analysis. The contractor shall also

make updates to the IO Model Builder Python script to support building one or more versions of the updated models. The contractor shall modify the underlying openLCA data structure to incorporate the tracking of materials associated with a product through discussions with the WACOR/TM. The contractor shall also extend the calculation framework of openLCA to permit calculation of indicators based on groups of intermediate flows (such as electricity, or waste processes). Indicators should also be created that quantify the following types of intermediate exchanges: energy, waste, and materials based on WACOR/TM guidance. The contractor shall make changes to the results presentation based on WACOR/TM instructions. The contractor shall develop or configure, test, stage, and release the SMM Prioritization Tool and IO Model Builder script by applying iterative processes utilizing the proposed Agile methodology and a frequent release cycle.¹ The existing 508 compliance check for the SMM Prioritization Tool should be updated following the final edits to assure that the software remains 508 compliant. All source code should be regularly updated in the EPA SMM Tool GitHub repository and final source code shall be posted at the time of creation of the final compiled/executable versions of the SMM Tool and IO Model Builder scripts.

Product: Executable/compiled versions of the SMM Prioritization Tool and associated IO Model Builder script with enhanced functionality and the source code.

Product – An updated user guide for the SMM Tool

Task 5 – Model documentation

In this task, the regional model for GA (GA-USEEIO) developed in the previous period of performance will be documented and new updates to the model described in the previous tasks will be documented.

Product – A draft manuscript describing the approach used to develop the GA-USEEIO model

Product – One or more draft manuscripts describing the use and end-of-life phase additions to the USEEIO model as well as other updates as described in Task 1

Task 6 – Facilitation for state-level engagement

The primary purpose of the Georgia Pilot is to evaluate a state-specific SMM model (the GA-USEEIO model) with the Georgia Stakeholder Group and obtain feedback on how effective the model is for helping the stakeholders develop suitable policies for SMM. Under WA-00-23, the Contractor assisted EPA with establishing a Georgia Stakeholder Group and facilitated a first meeting between EPA and the Georgia Stakeholder Group to evaluate results from the GA-USEEIO Model. In continuation of the Georgia Pilot, the Contractor shall provide facilitation support to assist with a minimum of two (2) follow-up stakeholder discussions to evaluate the model and associated SMM approach and its value to stakeholders for policy development. If directed by the EPA WACOR, these meetings will occur face-to-

¹ See EPA descriptions of agile frameworks: <https://developer.epa.gov/guide/templates-guides/agile/agile-frameworks/> and the Agile Software Development manifesto <http://agilemanifesto.org/>

face, with the selection and securing of a meeting location, as well as planning for the face-to-face discussion handled by the EPA WACOR. Otherwise, the meetings shall occur via webinar. For either case, the Contractor shall document the meeting proceedings and outcomes as directed by the EPA WACOR. Outcomes of the meeting shall include, but are not limited to, stakeholder feedback regarding the utility of the GA-USEEIO model and a summary of policy development activities and plans.

The long-term outcome of the Georgia Pilot is to develop an approach for EPA to work with any state to implement its SMM Vision. A key part of the approach will be guidance on stakeholder engagement for SMM. The Contractor, as directed by the EPA WACOR, shall develop a draft framework to guide stakeholder engagement for SMM based on the knowledge obtained from the facilitation process.

Deliverable – The contractor shall deliver a report describing the process and outcomes of the stakeholder engagement meetings using an electronic format specified by the EPA WACOR.

Deliverable - The Contractor shall deliver a report describing a draft framework to engage stakeholders for SMM using an electronic format specified by the EPA WACOR.

V. SCHEDULE/DELIVERABLES TABLE

Product	Deliverable Date
Updated USEEIO and GA-USEEIO models	5/30/2017
Use phase datasets for USEEIO	2/28/2017
End-of-life phase datasets for USEEIO	3/31/2017
Executable/compiled versions of the SMM Prioritization Tool and associated IO Model Builder script	7/30/2017
An updated user guide for the SMM Tool	7/30/2017
One or more draft manuscripts describing the model updates	7/30/2017
A draft manuscript describing the approach used to develop the GA-USEEIO model	10/15/2016
A report describing the process and outcomes of the stakeholder engagement meetings	7/30/2017
A report describing a draft framework to engage stakeholders for SMM	7/30/2017

VI. REPORTING REQUIREMENTS

As specified by the WACOR:

Monthly Progress Reports (including a progress evaluation discussion)
Financial Reports

VII. GREEN MEETINGS AND CONFERENCES

The contractor shall follow the provision of EPA prescription 1523.703-1, *Acquisition of environmentally preferable meeting and conference services (May 2007)*, for the use of off-site commercial facilities for an EPA event, whether the event is a meeting, conference, training session, or other purpose. Environmental preferability is defined at FAR 2.101, and shall be used when soliciting quotes or offers for meeting/conference services on behalf of the Agency.

VIII. CONFERENCES AND WORKSHOPS

The tasks under this work assignment do not require the acquisition of "off-site" facilities for conferences and meetings as defined in the IPN 12-05. IN ADDITION, the events associated with this work assignment are not covered by EPA Order 1900.3 and do not require EPA Form 5170.

The contractor shall immediately alert the WACOR to any anticipated event under the work assignment which may result in incurring an estimated \$20,000 or more cost, funded by EPA, specific to that event, meeting, training, etc. Those costs would include travel of both prime and consultant personnel, planning and facilitation costs, AV and rental of venue costs, etc. The EPA WACOR will then prepare for approval the internal paperwork for the event and will advise the contractor when appropriate signatures have been obtained. At that point, effort can proceed for the event. If the event is being sponsored by another EPA organization, the organization providing the planning is responsible for the approval.

Any event which meets the definition of a "conference," with total net expenditures greater than \$20,000, is required to submit EPA Electronic Form 5170 and Form 5170-A (with cost estimates/actuals). In the case the workflow system is down and CORs require emergency approval, they can submit EPA Form 5170 (PDF) (2pp, 93K) (with cost estimates) to conference@epa.gov.

IX. SOFTWARE APPLICATION AND ACCESSIBILITY (SECTION 508 REHABILITATION ACT AND AMENDMENTS)

Software Application files, if delivered to the Government, shall conform to the requirements relating to accessibility as detailed to the 1998 amendments to the Rehabilitation Act, particularly, but not limited to, § 1194.21 Software applications and operating systems and § 1194.22 Web-based intranet and internet information and applications. See: <http://www.section508.gov/>

Preferred text format:	MS Word, 8.0 or higher (Office 2007 or higher)
Preferred presentation format:	Power Point, Office 2007 or higher
Preferred graphics format:	Each graphic is an individual GIF file

Preferred portable format: Adobe Acrobat, version 6.0.

The WACOR shall identify which of delivered products will require 508 compliance.

QUALITY ASSURANCE SURVEILLANCE PLAN
For WSD's Mission Support

Quality Assurance Surveillance Plan

The requirements contained in this WA are considered performance-based, focusing on the Agency's desired results and outcomes. The contractor shall be responsible for determining the most effective means by which these requirements will be fulfilled. In order to fulfill the requirements, the contractor shall design innovative processes and systems that can deliver the required services in a manner that will best meet the Agency's performance objectives. This performance-based requirement represents a challenge to the contractor to develop and apply innovative and efficient approaches for achieving results and meeting or exceeding the performance objectives, measures, and standards described in Attachment 4 of the contract. The Contractor's performance will be reflected in the positive or negative evaluation offered by the Agency in the Contractor Performance Evaluation (CPE), which is evaluated annually (per the "Contractor Performance Evaluation" clause in the contract). The WACOR shall submit a complete annual review of the areas outlined in the Quality Assurance Surveillance Plan (QASP), included in the contract, which will then be utilized by the CLCOR in preparing the overall evaluations submitted annually in response to the Contractor Performance Evaluation requirements in the contract.

EPAUnited States Environmental Protection Agency
Washington, DC 20460**Work Assignment**

Work Assignment Number

01-20

☐ Other☒ Amendment Number:

000001

Contract Number
EP-C-15-012

Contract Period 08/01/2015 To 07/31/2017

Title of Work Assignment/SF Site Name

Sustainable Materials Mgmt GA

Contractor
CSRA LLC

Specify Section and paragraph of Contract SOW

2.10, 3.1.3, 3.1.15, 3.1.16, 3.1.17, 3.16

Purpose:

☐

Work Assignment

☐

Work Assignment Close-Out

☒

Work Assignment Amendment

☐

Incremental Funding

☐

Work Plan Approval

Period of Performance

From 08/01/2016 To 07/31/2017

Comments:

The purpose of this amendment 1 to CSRA (EP-C-15-012) WA 01-20 is to reduce the work requested.

☐

Superfund

Accounting and Appropriations Data

☒

Non-Superfund

SFO
(Max 2)☐

Note: To report additional accounting and appropriations data use EPA Form 1900-69A.

Line	DCN (Max 6)	Budget/FY (Max 4)	Appropriation Code (Max 6)	Budget Org/Code (Max 7)	Program Element (Max 9)	Object Class (Max 4)	Amount (Dollars)	(Cents)	Site/Project (Max 8)	Cost Org/Code
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Authorized Work Assignment Ceiling

Contract Period:

Cost/Fee:

LOE:

08/01/2015 To 07/31/2017

This Action:

Total:

Work Plan / Cost Estimate Approvals

Contractor WP Dated:

Cost/Fee

LOE:

Cumulative Approved:

Cost/Fee

LOE:

Work Assignment Manager Name David Meyer

Branch/Mail Code:

Phone Number: 513-569-7194

FAX Number:

(Signature)

(Date)

Project Officer Name Nancy Parrotta

Branch/Mail Code:

Phone Number: 202-564-5260

FAX Number:

(Signature)

(Date)

Other Agency Official Name Erin Ridder

Branch/Mail Code:

Phone Number: 513-487-2155

FAX Number:

(Signature)

(Date)

Contracting Official Name Sandra Stargardt-Licis

Branch/Mail Code:

Phone Number: 513-487-2006

FAX Number:

(Signature)

(Date)

EPAUnited States Environmental Protection Agency
Washington, DC 20460**Work Assignment**

Work Assignment Number

01-21

☐ Other☐ Amendment Number:

Contract Number

EP-C-15-012

Contract Period 08/01/2015 To 07/31/2017

Base

Option Period Number 1

Title of Work Assignment/SF Site Name

OpenLCA and LCI

Contractor

CSC GOVERNMENT SOLUTIONS LLC

Specify Section and paragraph of Contract SOW

2.10, 3.1.3, 3.1.15, 3.1.16, 3.1.17, 3.16

Purpose:



Work Assignment



Work Assignment Close-Out



Work Assignment Amendment



Incremental Funding



Work Plan Approval

Period of Performance

From 08/01/2016 To 07/31/2017

Comments:

In accordance with contract clause B.1 EPAAR 1552.211-74 Work Assignments (DEC 2014)- Alternate III (DEC 2014) paragraph (c) the contractor is not authorized to start work without an approved work plan.



Superfund

Accounting and Appropriations Data



Non-Superfund

SFO

(Max 2)



Note: To report additional accounting and appropriations data use EPA Form 1900-69A.

Line	DCN (Max 6)	Budget/FY (Max 4)	Appropriation Code (Max 6)	Budget Org/Code (Max 7)	Program Element (Max 9)	Object Class (Max 4)	Amount (Dollars)	(Cents)	Site/Project (Max 8)	Cost Org/Code
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Authorized Work Assignment Ceiling

Contract Period:

Cost/Fee:

LOE:

08/01/2015 To 07/31/2017

This Action:

Total:

Work Plan / Cost Estimate Approvals

Contractor WP Dated:

Cost/Fee

LOE:

Cumulative Approved:

Cost/Fee

LOE:

Work Assignment Manager Name David Meyer

(Signature)

(Date)

Branch/Mail Code:

Phone Number: 513-569-7194

FAX Number:

Project Officer Name Nancy Parrotta

(Signature)

(Date)

Branch/Mail Code:

Phone Number: 202-564-5260

FAX Number:

Other Agency Official Name

(Signature)

(Date)

Branch/Mail Code:

Phone Number:

FAX Number:

Contracting Official Name Donna Reinhart

(Signature)

(Date)

Branch/Mail Code:

Phone Number: 513-487-2114

FAX Number:

**WORK ASSIGNMENT (WA)
PERFORMANCE WORK STATEMENT (PWS)**

Contract No. EP-C-15-012

Work Assignment: WA-01-21

WACOR: **Name:** David E. Meyer
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Period of Performance: Effective date of WA to July 31, 2017

Title: OpenLCA and LCI (Life Cycle Assessment and Life Cycle Inventory)

PWS Sections: 2.10, 3.1.3, 3.1.15, 3.1.16, 3.1.17, 3.16

I. PURPOSE:

"In its early years, EPA acted primarily as the nation's environmental watchdog, striving to ensure that industries met legal requirements to control pollution. In subsequent years, EPA began to develop theory, tools, and practices that enabled it to move from controlling pollution to preventing it. Today EPA aims to make sustainability the next level of environmental protection by drawing on advances in science and technology to protect human health and the environment, and promoting innovative green business practices."

The public and private sectors, domestically and internationally are in the midst of a transition toward decision-making based on holistic sustainability considerations. The scientific foundations required to support those considerations will need to overcome our present artificial compartmental constructs to enable cross-discipline, cross-origin merging of information. A key tool used as part of sustainability analysis is life cycle assessment (LCA). While a few robust tools exist commercially, their associated licensing costs are prohibitive to using them to support LCA activities involving US EPA. To overcome this challenge, US EPA is helping to develop a suite of open source life-cycle-based tools to support the application of LCA to decision making for sustainability.

The primary purpose of this work assignment is to develop and expand the capabilities of LCA software and applications to better meet EPA LCA and programmatic needs. To achieve this purpose the contractor shall be expected to perform the following types of activities under the direction of the EPA WACOR: 1. Modify and improve existing LCA software; 2. Develop web-based LCA applications. The intended audience for this project are those who wish to use life cycle tools to support decision making. This project supports programmatic support needs related to our national all hazards homeland security responsibilities by enabling decision makers to consider how to use the nation's natural resources and materials, including water, in a manner that is safe and sustainable.

II. BACKGROUND:

This effort is primarily a continuation of work performed under EP-C-15-012, WA-00-21. A new type of work related to inventory modeling for LCA is being added to support efficient application of LCA for decision support. EPA has worked with the developers of an existing LCA framework to improve data interoperability and the output of results from their tool to increase its usefulness and effectiveness for supporting decisions by the EPA and its partners. While EPA does provide direction in this PWS on the functionality of the framework, the resulting tool remains the property of the contractor and they are its distributor. Additional work is needed in this work assignment to: (1) tailor the openLCA framework to enable application of LCA for specific programmatic needs; (2) make the openLCA framework application compatible with the semantic data management system being created under EP-15-C-000100, and (3) develop a dataset to support automated modeling of the cradle-to-gate supply chain for chemical and/or product manufacturing.

III. QA REQUIREMENTS:

Task(s) 1 through 6 in this WA require the use of primary and/or secondary data or involve the development of software. Consistent with the Agency's Quality Assurance (QA) requirements, the contractor must maintain a Project Specific Quality Assurance Project Plan (PQAPP), to assure the quality of the data used under this WA. Work on this/these task(s) cannot proceed until the contractor receives notification that an approved PQAPP is on file from the Contract Level Contracting Officer's Representative (CL COR) via e-mail. The QA requirements must be addressed in the work plan and

monthly progress reports as specified under Task 0, below. A software development PQAPP, G-STD-0030044-QP-1-0 has been prepared previously for WA-00-21 and shall still be used in this WA for Tasks 1 through 5. The requirements and format for a secondary data PQAPP to support Task 6 are provided as an appendix to this PWS. For Task 6, the contractor shall amend PQAPP G-STD-0030043-QP-1-0, prepared for Task 7 under WA-00-21, to include the secondary data requirements.

IV. DETAILED TASK DESCRIPTION:

All direction under this WA will be provided as written technical direction from the WACOR, or Alternate WACOR, as appropriate. If provided first as verbal technical direction to the contractor, it will be confirmed in writing within 5 calendar days, with a copy to the CL COR and the Contracting Officer (CO), and is subject to the limitations of the technical direction contract clause. Each initial deliverable shall be provided to the EPA WACOR in draft form for review and comment. The contractor shall incorporate WACOR review comments into revisions of the drafts. All drafts and final reports shall be approved by the WACOR. The contractor shall develop or configure, test, stage, and release the openLCA framework enhancements described in Tasks 1-3 by applying iterative processes utilizing the proposed Agile methodology and a frequent release cycle.¹ All source code should be updated in the EPA openLCA GitHub repository² and final source code shall be posted at the time of creation of the final compiled/executable versions for this contract.

The contractor shall perform the following tasks:

Task 0: Work Plan (WP), Progress Evaluations, and Monthly Progress Reports

The contractor shall develop a WP that describes how each task will be carried out. The work plan shall include a schedule, staffing plan, level of effort (LOE), and cost estimate for each task, the contractor's key assumptions on which staffing plan and budget are based, and qualifications of proposed staff. In addition, the work plan shall include the requirement that all electronic and information technology (EIT) and all EIT deliverables be Section 508 compliant in accordance with the policies referenced at <http://www.epa.gov/accessibility/>. If a subcontractor(s) is proposed and subcontractors are outside the local metropolitan area, the contractor shall include information on plans to manage work and contract costs.

For Tasks 1-5, the Contractor shall follow the software PQAPP, G-STD-0030044-QP-1-0, prepared under WA-00-21. For Task 6, the contractor shall amend PQAPP G-STD-0030043-QP-1-0, as noted above, and ensure the quality of primary and/or secondary data used to complete these tasks. The contractor shall use the EPA PQAPP format and requirements for secondary data projects outlined in Appendix 1 of this performance work statement as directed by the WACOR for the amendment. The monthly progress

¹ See EPA descriptions of agile frameworks: <https://developer.epa.gov/guide/templates-guides/agile/agile-frameworks/> and the Agile Software Development manifesto <http://agilemanifesto.org/>

² <https://github.com/usepa/openlca>

report shall indicate, in a separate QA section, whether significant QA issues have been identified and how they are being resolved. The WP shall explain when the secondary data PQAPP will be submitted based on the specific data requirements of the WA. Work on these tasks cannot proceed until the contractor receives notification of the new PQAPP approval from the CL COR via e-mail.

In each monthly progress report, the contractor shall, at the introduction to the discussion of this WA, discuss actual progress toward achieving the purpose of this work assignment, including problems encountered, issues that may need to be resolved, and anticipated timing for completing the goals of the WA. The contractor shall provide an overview of contract projects, striving to implement efficiencies in performance when complimentary requirements are issued. The contractor shall assure that duplication of effort relative to other ongoing WA under this contract is not occurring.

Deliverables: Work plan, monthly progress and financial reports, and an amended PQAPP containing the secondary data requirements and format specified by the WACOR.

Task 1 – OpenLCA data quality assessment system

Under WA-00-21, the openLCA framework for handling data quality structure was extended to be flexible to allow users to edit the criteria and scoring system the analysis capabilities were enhanced to be able to view data quality results, and the JSON-LD file format was extended to incorporate the data quality information in new processes. This task would continue to support additional improvements to the data quality system based on WACOR/TM guidance.

Deliverable: openLCA version with further enhanced data quality system

Task 2 – Metadata Improvements in openLCA

This task is intended to feed into and support work of the MetaData Working Group of the Global Network of LCA databases and the US Federal LCA Commons. The contractor shall implement additional metadata descriptor fields or make changes to existing fields for process datasets in openLCA 1.4 as directed by the WACOR. Changes may include indicating which fields are mandatory for Global Network minimum requirements or checks that mandatory fields are completed. These contractor shall implement guidance in the software as directed by the WACOR to assist users completing these fields. An example of such guidance is a "tool tip". Additionally, the contractor shall implement a feature in openLCA to upload and view a process flow diagram in openLCA 1.4 using a graphical format specified by the WACOR. The contractor shall revise the openLCA .JSON format to incorporate all new and modified fields.

Deliverable: openLCA version containing all metadata-related improvements

Task 3 – Using the US Federal LCA elementary flow list in OpenLCA

openLCA 1.4 currently allows users to create a database using a pre-defined list of elementary flows. Instead, users should be able to create databases by selecting a flow list from a default list upon start up. As an example, users could select the US Federal LCA Commons Master Elementary Flow List as their default flow list in openLCA 1.4. Offering alternative master flow lists will require making impact assessment methods compatible with each master flow list option. The contractor shall incorporate the

US Federal LCA Commons Master Elementary Flow List into openLCA 1.4 as an option for creating databases and make the impact assessment methods compatible with this list.

Deliverable: A version of openLCA that supports the Federal LCA Commons Master List

Task 4 – Technical openLCA support

As directed by the WACOR, the contractor shall provide general support to EPA LCA researchers on using openLCA and fixing minor bugs in the software for the duration of the period of performance of this performance work statement.

Deliverable: Technical support to EPA LCA researchers for the duration of the period of performance.

Task 5 – Documentation of EPA-supported improvements to openLCA

EPA has supported and collaborated on improvements to openLCA and built additional applications upon openLCA (e.g. WARM, SMM Tool) since 2012. Current users of the software are largely unaware of the specific improvements supported by EPA. The purpose of this task is to support EPA's effort to document these improvements in a short manuscript. As directed by the WACOR, the contractor shall provide technical descriptions/screenshots of these improvements for use in EPA's manuscript.

Deliverable: Technical description of EPA-sponsored improvements and extensions to openLCA

Task 6 – Chemical synthesis library to support automated identification of the primary supply chain for the manufacture of a chemical or product

A key part of developing life cycle inventory is being able to trace back the origins of a chemical or product through its supply chain from the "gate", or point it has been manufactured, to the "cradle", the basic materials coming out of the ground (e.g. crude oil, mineral ore, etc.). This can be a time consuming process and it would be desirable to automate this process. In this task the contractor shall create a data library that can support such an activity by compiling information that describes typical chemical synthesis routes for both general classes of chemicals and specific chemicals. The WACOR shall specify the minimum chemical classes and specific chemicals that will be included in the library. An example of such information can be found in EPA Report EPA/310-R-02-001 ("Profile of the Organic Chemical Industry, 2nd Edition; 2002), pgs. 11-22. EPA routinely collects such information and the WACOR shall supply the contractor with this information as needed. The contractor shall extract the pertinent information from the sources provided by the WACOR and develop a library and underlying schema that presents the information in a machine-readable format, as specified by the WACOR, to support future development of automated approaches for constructing a cradle-to-gate supply chain for a chemical or product. The contractor shall provide a draft version of the library for the WACOR to review the chemical coverage and schema. The contractor shall then revise the library, both the coverage and schema, based on direction from the WACOR, and prepare a final version of the library. If directed by the WACOR, the contractor shall perform limited data searches to fill data gaps related to the coverage of chemical classes or specific chemicals identified during the WACOR's review.

Milestone: Draft library containing data describing common chemical synthesis routes for specific chemicals or chemical classes as specified by the WACOR.

Deliverable: Final machine-readable library of data describing chemical synthesis

V. SCHEDULE/DELIVERABLES TABLE

Task	Milestone or Deliverable	2016					2017						
		Aug	Sep	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul
0	Workplan (D)												
	PQAPP (D)												
	Monthly Reports (D)												
1	openLCA version with further enhanced data quality system (D)												
2	openLCA version containing all metadata improvements (D)												
3	A version of openLCA that supports the Federal LCA Commons Master List (D)												
4	Technical support to EPA LCA researchers for the duration of the period of performance. (D)												
5	Technical description of EPA-sponsored improvements and extensions to openLCA (D)												
6	Draft library containing data describing common chemical synthesis routes for specific chemicals or chemical classes (M)												
	Final machine-readable library of data describing chemical synthesis (D)												

D = Deliverable, M = Milestone

VI. REPORTING REQUIREMENTS

Monthly Progress Reports (including a progress evaluation discussion)

Financial Reports

Project Specific PQAPP

VII. GREEN MEETINGS AND CONFERENCES

The contractor shall follow the provision of EPA prescription 1523.703-1, *Acquisition of environmentally preferable meeting and conference services (May 2007)*, for the use of off-site commercial facilities for an EPA event, whether the event is a meeting, conference, training session, or other purpose. Environmental preferability is defined at FAR 2.101, and shall be used when soliciting quotes or offers for meeting/conference services on behalf of the Agency.

VIII. CONFERENCES AND WORKSHOPS

The tasks under this work assignment do not require the acquisition of "off-site" facilities for conferences and meetings as defined in the IPN 12-05. AND the events associated with this work assignment are not covered by EPA Order 1900.3 and do not require EPA Form 5170.

The contractor shall immediately alert the WACOR to any anticipated event under the work assignment which may result in incurring an estimated \$20,000 or more cost, funded by EPA, specific to that event, meeting, training, etc. Those costs would include travel of both prime and consultant

personnel, planning and facilitation costs, AV and rental of venue costs, etc. The EPA WACOR will then prepare for approval the internal paperwork for the event and will advise the contractor when appropriate signatures have been obtained. At that point, effort can proceed for the event. If the event is being sponsored by another EPA organization, the organization providing the planning is responsible for the approval.

Any event which meets the definition of a "conference," with total net expenditures greater than \$20,000, is required to submit EPA Electronic Form 5170 and Form 5170-A (with cost estimates/actuals). In the case the workflow system is down and CORs require emergency approval, they can submit EPA Form 5170 (PDF) (2pp, 93K) (with cost estimates) to conference@epa.gov.

IX. SOFTWARE APPLICATION AND ACCESSIBILITY (SECTION 508 REHABILITATION ACT AND AMENDMENTS)

Software Application files, if delivered to the Government, shall conform to the requirements relating to accessibility as detailed to the 1998 amendments to the Rehabilitation Act, particularly, but not limited to, § 1194.21 Software applications and operating systems and § 1194.22 Web-based intranet and internet information and applications. See: <http://www.section508.gov/>

Preferred text format:	MS Word, 8.0 or higher (Office 2007 or higher)
Preferred presentation format:	Power Point, Office 2007 or higher
Preferred graphics format:	Each graphic is an individual GIF file
Preferred portable format:	Adobe Acrobat, version 6.0

The WACOR shall identify which of delivered products will require 508 compliance.

QUALITY ASSURANCE SURVEILLANCE PLAN
for WSD's Mission Support

Quality Assurance Surveillance Plan

The requirements contained in this WA are considered performance-based, focusing on the Agency's desired results and outcomes. The contractor shall be responsible for determining the most effective means by which these requirements will be fulfilled. In order to fulfill the requirements, the contractor shall design innovative processes and systems that can deliver the required services in a manner that will best meet the Agency's performance objectives. This performance-based requirement represents a challenge to the contractor to develop and apply innovative and efficient approaches for achieving results and meeting or exceeding the performance objectives, measures, and standards described in Attachment 4 of the contract. The Contractor's performance will be reflected in the positive or negative evaluation offered by the Agency in the Contractor Performance Evaluation (CPE) which is evaluated annually (per the "Contractor Performance Evaluation" clause in the contract). The WACOR shall submit a complete annual review of the areas outlined in the Quality Assurance Surveillance Plan (QASP), included in the contract, which will then be utilized by the CLCOR in preparing the overall evaluations submitted annually in response to the Contractor Performance Evaluation requirements in the contract.

Appendix 1: NRMRL Secondary Data PQAPP Template

NRMRL QAPP REQUIREMENTS FOR SECONDARY DATA PROJECTS

GENERAL REQUIREMENTS: Include cover page, distribution list, approvals, and page numbers.

0. COVER PAGE

Include the Division/Branch, project title, revision number, EPA technical lead, QA category, organization responsible for QAPP preparation, and date.

1. PROJECT DESCRIPTION AND OBJECTIVES

- 1.1 Describe the process and/or environmental system to be evaluated.
- 1.2 State the purpose of the project and list specific project objective(s).

2. ORGANIZATION AND RESPONSIBILITIES

- 2.1 Identify all project personnel, including QA, and related responsibilities for each participating organization, as well as their relationship to other project participants.
- 2.2 Include a project schedule that includes key milestones.

3. SCIENTIFIC APPROACH

- 3.1 Identify the secondary data needed to meet the project objective(s). Specify requirements relating to the type of data, the age of data, geographical representation, temporal representation, and technological representation, as applicable.
- 3.2 Identify the source(s) for the secondary data. Discuss the rationale for selecting the source(s) identified. If a hierarchy of sources exists for the gathering of secondary data, specify that hierarchy.

4. QUALITY METRICS

- 4.1 Specify the quality requirements of the secondary data. These requirements must be appropriate for the intended use of the data. Address accuracy, precision, representativeness, completeness, and comparability, if applicable.
- 4.2 Describe the procedures for determining the quality of the secondary data.
- 4.3 If no project-specific data quality requirements exist, state this in the QAPP. If the quality of the secondary data will not be evaluated by EPA, require that a disclaimer be added to any project deliverable to indicate that the quality of the secondary data has not been evaluated by EPA for this specific application. Provide the wording for the disclaimer.

5. DATA ANALYSIS, INTERPRETATION, AND MANAGEMENT

- 5.1 Identify the data reporting requirements, including data reduction procedures specific to the project and applicable calculations and equations.
- 5.2 Describe data validation procedures used to ensure the reporting of accurate project data.
- 5.3 Describe how the data will be summarized or analyzed (e.g., qualitative analysis, descriptive or inferential statistics) to meet the project objective(s).
 - 5.3.1 If descriptive statistics are proposed, state what tables, plots, and/or statistics (e.g., mean, median, standard error, minimum and maximum values) will be used to summarize the data.
 - 5.3.2 If an inferential method is proposed, indicate whether the method will be a hypothesis test, confidence interval, or confidence limit and describe how the method will be performed.
- 5.4 Describe data storage requirements for both hard copy and electronic data.

6. REPORTING

- 6.1 List and describe the deliverables expected from each project participant.
- 6.2 Specify the expected final product(s) that will be prepared for the project (e.g., journal article, final report, etc.). Specify the source(s) of the secondary data in any deliverable.

7. REFERENCES

Provide references either in the body of the text as footnotes or in a separate section

EPAUnited States Environmental Protection Agency
Washington, DC 20460**Work Assignment**

Work Assignment Number

01-21

☐ Other☒ Amendment Number:

000001

Contract Number

EP-C-15-012

Contract Period 08/01/2015 To 07/31/2017

Base

Option Period Number 1

Title of Work Assignment/SF Site Name

Open LCA and LCI

Contractor

CSRA LLC

Specify Section and paragraph of Contract SOW

2.10, 3.1.3, 3.1.15, 3.1.16, 3.1.17, 3.16

Purpose:

☐

Work Assignment

☐

Work Assignment Close-Out

☒

Work Assignment Amendment

☐

Incremental Funding

☐

Work Plan Approval

Period of Performance

From 08/01/2016 To 07/31/2017

Comments:

The purpose of this amendment 1 to CSRA (EP-C-15-012) WA 01-21 is to reduce the scope of work for this work assignment.

☐

Superfund

Accounting and Appropriations Data

☒

Non-Superfund

SFO

(Max 2)

☐

Note: To report additional accounting and appropriations data use EPA Form 1900-69A.

Line	DCN (Max 6)	Budget/FY (Max 4)	Appropriation Code (Max 6)	Budget Org/Code (Max 7)	Program Element (Max 9)	Object Class (Max 4)	Amount (Dollars)	(Cents)	Site/Project (Max 8)	Cost Org/Code
1										
2										
3										
4										
5										

Authorized Work Assignment Ceiling

Contract Period:

08/01/2015 To 07/31/2017

Cost/Fee:

LOE:

This Action:

Total:

Work Plan / Cost Estimate Approvals

Contractor WP Dated:

Cost/Fee

LOE:

Cumulative Approved:

Cost/Fee

LOE:

Work Assignment Manager Name David Meyer

Branch/Mail Code:

Phone Number: 513-569-7194

FAX Number:

(Signature)

(Date)

Project Officer Name Nancy Parrotta

Branch/Mail Code:

Phone Number: 202-564-5260

FAX Number:

(Signature)

(Date)

Other Agency Official Name Erin Ridder

Branch/Mail Code:

Phone Number: 513-487-2155

FAX Number:

(Signature)

(Date)

Contracting Official Name Sandra Stargardt-Licis

Branch/Mail Code:

Phone Number: 513-487-2006

FAX Number:

(Signature)

(Date)

EPAUnited States Environmental Protection Agency
Washington, DC 20460**Work Assignment**

Work Assignment Number

01-21

☐

Other

☒

Amendment Number:

000002

Contract Number

EP-C-15-012

Contract Period 08/01/2015 To 07/31/2017

Base

Option Period Number 1

Title of Work Assignment/SF Site Name

Open LCA and LCI

Contractor

CSRA LLC

Specify Section and paragraph of Contract SOW

2.10, 3.1.3, 3.1.15, 3.1.16, 3.1.17, 3.16

Purpose:

☐

Work Assignment

☐

Work Assignment Close-Out

☒

Work Assignment Amendment

☐

Incremental Funding

☐

Work Plan Approval

Period of Performance

From 08/01/2016 To 07/31/2017

Comments:

The purpose of amendment 2 to CSRA (EP-C-15-012) WA 01-21 is to reduce the scope and associated level of effort for Tasks 2 and 3. The scope of Task 6 is revised to focus on ontology development support as opposed to database development. A new Task 7 has been added to address additional needs of US EPA.

☐

Superfund

Accounting and Appropriations Data

☒

Non-Superfund

SFO

(Max 2)

☐

Note: To report additional accounting and appropriations data use EPA Form 1900-69A.

Line	DCN (Max 6)	Budget/FY (Max 4)	Appropriation Code (Max 6)	Budget Org/Code (Max 7)	Program Element (Max 9)	Object Class (Max 4)	Amount (Dollars)	(Cents)	Site/Project (Max 8)	Cost Org/Code
1										
2										
3										
4										
5										

Authorized Work Assignment Ceiling

Contract Period:

Cost/Fee:

LOE:

08/01/2015 To 07/31/2017

This Action:

Total:

Work Plan / Cost Estimate Approvals

Contractor WP Dated:

Cost/Fee

LOE:

Cumulative Approved:

Cost/Fee

LOE:

Work Assignment Manager Name David Meyer

Branch/Mail Code:

Phone Number: 513-569-7194

FAX Number:

(Signature)

(Date)

Project Officer Name Nancy Parrotta

Branch/Mail Code:

Phone Number: 202-564-5260

FAX Number:

(Signature)

(Date)

Other Agency Official Name

Branch/Mail Code:

Phone Number:

(Signature)

(Date)

Contracting Official Name Donna Reinhart

Branch/Mail Code:

Phone Number: 513-487-2114

FAX Number:

(Signature)

(Date)

EPAUnited States Environmental Protection Agency
Washington, DC 20460**Work Assignment**

Work Assignment Number

01-22

☐

Other

☐

Amendment Number:

Contract Number

EP-C-15-012

Contract Period 08/01/2015 To 07/31/2017

Base

Option Period Number 1

Title of Work Assignment/SF Site Name

OGWDW Strategic Plan

Contractor

CSC GOVERNMENT SOLUTIONS LLC

Specify Section and paragraph of Contract SOW

2.1, 2.15, 2.16

Purpose:

☒

Work Assignment

☐

Work Assignment Close-Out

☐

Work Assignment Amendment

☐

Incremental Funding

☐

Work Plan Approval

Period of Performance

From 08/01/2016 To 07/31/2017

Comments:

In accordance with contract clause B.1 EPAAR 1552.211-74 Work Assignments. (DEC 2014)- Alternate III (DEC 2014) paragraph (c) the WA is authorized for IMMEDIATE START on August 1, 2016.

☐

Superfund

Accounting and Appropriations Data

☒

Non-Superfund

SFO
(Max 2)☐

Note: To report additional accounting and appropriations data use EPA Form 1900-69A.

Line	DCN (Max 6)	Budget/FY (Max 4)	Appropriation Code (Max 6)	Budget Org/Code (Max 7)	Program Element (Max 9)	Object Class (Max 4)	Amount (Dollars)	(Cents)	Site/Project (Max 8)	Cost Org/Code
1										
2										
3										
4										
5										

Authorized Work Assignment Ceiling

Contract Period:

08/01/2015 To 07/31/2017

Cost/Fee:

LOE: 0

This Action:

370

Total:

370

Work Plan / Cost Estimate Approvals

Contractor WP Dated:

Cost/Fee

LOE:

Cumulative Approved:

Cost/Fee

LOE:

Work Assignment Manager Name Debbie Newberry

Branch/Mail Code:

Phone Number: 202-564-1415

FAX Number:

(Signature)

(Date)

Project Officer Name Nancy Parrotta

Branch/Mail Code:

Phone Number: 202-564-5260

FAX Number:

(Signature)

(Date)

Other Agency Official Name

Branch/Mail Code:

Phone Number:

FAX Number:

(Signature)

(Date)

Contracting Official Name Donna Reinhart

Branch/Mail Code:

Phone Number: 513-487-2114

FAX Number:

(Signature)

(Date)

**WORK ASSIGNMENT
PERFORMANCE WORK STATEMENT (PWS)**

Contract No. EP-C-15-012

Work Assignment: WA-01-22

WACOR: **Name:** Debbie Newberry
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 E-mail: Newberry.debbie@epa.gov
 Mail code: 4606M
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 City, State, Zip: Washington, DC 20460

Tech Expert **Name:** Tiffany Cooper
 Office: Office of Groundwater and Drinking Water
 Phone: 202-564-1586
 FAX:
 E-mail: cooper.tiffany@epa.gov
 Mail code: 4601M
 Street Address: 1200 Pennsylvania Ave., NW
 City, State, Zip: Washington, DC 20460

LOE: 370 hours

Period of Performance: August 1, 2016 through July 31, 2017

Title: Office of Ground Water and Drinking Water Strategic Planning and National Action Plan

PWS Sections 2.1, 2.15, 2.16

I. PURPOSE:

The purpose of this work assignment is to support the Office of Ground Water and Drinking Water (OGWDW) in developing a five year strategic plan for the Office and a Safe Drinking Water Act National Action Plan for the Agency. Both plans will chart the course for advancing EPA's and the Office of Ground Water and Drinking Water's priorities and mission to protect human health and the environment.

Strategic planning is important to an organization because it provides a sense of direction and outlines measurable goals. Strategic planning is a tool that is useful for guiding day-to-day decisions and also evaluating progress and changing approaches when moving forward.

The Plans will identify the measurable environmental and human health outcomes that the public can expect in the near-term and over the next five years and will describe how the Office intends to achieve those results. The Plans represent a commitment to our core values of science, transparency and the rule of law in managing our program. This planning will also expand the impact of the OGWDW by ensuring complementary EPA offices and programs understand its mission and goals.

To achieve this purpose the contractor shall be expected to develop products and resources that will support the ability of OGWDW to develop a final five year strategic plan and a SDWA National Action Plan.

II. BACKGROUND:

EPA's FY 2014 – 2018 Strategic Plan identifies five strategic goals to guide the Agency's work. The second goal, Protecting America's Waters specifically identifies achieving and maintaining standards and guidelines protective of human health in drinking water supplies, fish, shellfish, and recreational waters, and protect and sustainably manage drinking water resources as a goal.

In support of the Agency's goal for Protecting America's Water, the mission of the Office of Ground Water and Drinking Water, together with states, tribes, and many partners, will protect public health by ensuring safe drinking water and protecting our ground water.

This mission will be accomplished by implementing the following principles:

- Prevention as an effective approach;
- Risk-based priority setting for new and existing regulations, based on sound science, quality data in reliable databases, and quality methods and standards;
- Partnership and involvement of public and private organizations, citizens, and communities;
- Flexibility and effectiveness in implementation while maintaining a national public health baseline;
- Accountability of all parties through public participation and accessible information; and

Results documented and presented clearly

III. QA REQUIREMENTS:

The tasks in this Work Assignment (WA) do not require environmental measurements. Consistent with the Agency's quality assurance (QA) requirements, the contractor does not need to supplement the approved Quality Management Plan (QMP) of the contract or prepare a Project-Specific Quality Assurance Project Plan (PQAPP).

IV. DETAILED TASK DESCRIPTION:

All direction under this WA will be provided as written technical direction from the WACOR as appropriate. If provided first as verbal technical direction to the contractor, it will be confirmed in writing within 5 calendar days, with a copy to the Contract Level Contracting Officer's Representative (CL COR) and the Contracting Officer (CO), and is subject to the limitations of the technical direction contract clause. Each initial deliverable shall be provided to the EPA WACOR and EPA CL COR in

draft form for review and comment. The contractor shall incorporate WACOR review comments into revisions of the drafts. All drafts and final reports shall be approved by the WACOR.

The contractor shall perform the following tasks:

Task 0: Work Plan, Progress Evaluations, and Monthly Progress Reports

The contractor shall develop a work plan that describes how each task will be carried out. The work plan shall include a schedule, staffing plan, level of effort (LOE), and cost estimate for each task, the contractor's key assumptions on which staffing plan and budget are based, and qualifications of proposed staff. In addition, the workplan shall include the requirement that all electronic and information technology (EIT) and all EIT deliverables be Section 508 compliant in accordance with the policies referenced at <http://www.epa.gov/accessibility/>. If a subcontractor(s) is proposed and subcontractors are outside the local metropolitan area, the contractor shall include information on plans to manage work and contract costs. In addition, the work plan shall specify that a Supplemental Project Specific Quality Assurance Project Plan (SQAPP) appending the Contract Level QAPP or a PQAPP is not required. This task also includes monthly progress and financial reports. Monthly financial reports must include a table with the invoice LOE and cost amount broken out by the tasks in this WA.

Deliverables: Work plan and monthly progress and financial reports.

Task 1: Support for the Office of Ground Water and Drinking Water in Developing a Five Year Strategic Plan

To support these efforts, the contractor shall:

1. Prepare agendas for, and facilitate three meetings to be located in the Washington DC area (For planning purposes the meetings will last approximately 5 hours)
2. Produce written notes of each meeting
3. Participate in up to four one- hour conference calls with OGWDW during the development of the plan outline
4. Develop a strategic plan outline for the Office (For planning purposes this outline should be approximately 10 pages in length)

Deliverables:

1. Agendas for each meeting
2. Written notes of each meeting
3. Draft Outline of OGWDW Strategic Plan

Task 2: Support for the Office of Ground Water and Drinking Water in Developing a National Action Plan

As a follow-up to the stakeholder meetings and the materials developed during the base period of this contract, the contractor shall:

1. Prepare a draft thematic synthesis of the meeting discussions based on overarching themes from the meetings notes (For planning purposes, this should be no longer than 3 pages).
2. Develop a summary of post-meeting perspectives submitted by expert participants.
3. Continue work with the OGWDW to finalize the building blocks and key actions of the National Action Plan and provide an outline for a draft National Action Plan.
4. Develop draft National Action Plan with input from OGWDW (For planning purposes, the plan should be approximately 10-pages).
5. Work with OGWDW to finalize the National Action Plan based on input from OGWDW

Deliverables:

1. Thematic synthesis of stakeholder meetings
2. Summary of post-meeting participant submittals
3. Develop an outline for the SDWA National Action Plan
4. Develop draft SDWA National Action Plan
5. Develop final National Action Plan

V. SCHEDULE/DELIVERABLE

- The contractor(s) shall send EPA all reports in accordance with the terms of the basic contract. All deliverables shall be submitted electronically on a CD or by email in Microsoft format (e.g., Word, Excel, Access, etc.), in addition to a hard copy submittal, as requested by the WACOR.
- The contractor shall provide a work plan as set out in the table below.
- All reports shall be provided first in draft form. Upon receipt of comment from the WACOR, the contractor shall revise the report and finalize the report accordingly.

Due dates reflect the draft documents for WACOR consideration. Final deliverables are due no later than 15 days after receiving the WACOR's comments, unless the WACOR provides written technical direction indicating otherwise.

Other Deliverable Expectations:

Draft Meeting Agenda	2 weeks before meeting
Final Meeting Agenda	3 days before meeting
Draft Meeting Summaries	1 week after meeting dates
Final Meeting Summaries	3 days after receipt of WACOR(s) comment

<u>Deliverable</u>	<u>Due No Later Than</u>
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<p>Task 0: Work Plan, Progress Evaluations and Monthly Progress Reports</p> <p>Work Plan</p> <p>Monthly Progress and Financial Reports</p>	<p>According to Contract</p>
<p>Task 1: Support for the Office of Ground Water and Drinking Water in Developing a Five Year Strategic Plan</p> <ol style="list-style-type: none"> 1. Prepare agendas for based on information provided by EPA, and facilitate three meetings to be located in the Washington DC area (For planning purposes the meetings will last approximately 5 hours) 2. Produce written notes of each meeting 3. Participate in up to four one- hour conference calls with OGWDW during the development of the plan outline 4. Assist in developing a strategic plan outline for the Office (For planning purposes this outline should be approximately 10 pages in length) 	<p>Upon Written Technical Direction</p>

Task 2: Support for the Office of Ground Water and Drinking Water in Developing a National Action Plan

1. Prepare a draft thematic synthesis of the meeting discussions based on overarching themes from the meetings notes (For planning purposes, this should be no longer than 2 pages).
2. Develop a summary of post-meeting perspectives submitted by expert participants.
3. Continue work with the OGWDW to finalize the building blocks and key actions of the National Action Plan and provide an outline for a draft National Action Plan
4. Develop draft National Action Plan with input from OGWDW (For planning purposes, the plan should be approximately 10-pages)
5. Work with OGWDW to finalize the National Action Plan based on input from OGWDW

According to Written Technical Direction

According to Written Technical Direction

VI. REPORTING REQUIREMENTS

Monthly Progress Reports (including a progress evaluation discussion)
Financial Reports

VII. GREEN MEETINGS AND CONFERENCES

The contractor shall follow the provision of EPA prescription 1523.703-1, *Acquisition of environmentally preferable meeting and conference services (May 2007)*, for the use of off-site commercial facilities for an EPA event, whether the event is a meeting, conference, training session, or other purpose. Environmental preferability is defined at FAR 2.101, and shall be used when soliciting quotes or offers for meeting/conference services on behalf of the Agency.

For purposes of these meetings, EPA will provide meeting space.

VIII. CONFERENCES AND WORKSHOPS

The contractor shall immediately alert the WACOR to any anticipated event under the work assignment which may result in incurring an estimated \$20,000 or more cost, funded by EPA, specific to that event.

meeting, training, etc. Those costs would include travel of both prime and consultant personnel, planning and facilitation costs, including all outlays for conference preparation, AV and rental of venue costs, etc. The EPA WACOR will then prepare for approval the internal paperwork for the event and will provide it to the CO. The CO will advise the contractor when appropriate signatures have been obtained. At that point, effort can proceed for the event. If the event is being sponsored by another EPA organization, the organization providing the planning is responsible for the approval.

Any event which meets the definition of a "conference," with total net expenditures greater than \$20,000, is required to submit EPA Electronic Form 5170 and Form 5170-A (with cost estimates/actuals). In the case the workflow system is down and CORs require emergency approval, they can submit EPA Form 5170 (PDF) (2pp, 93K) (with cost estimates) to conference@epa.gov.

IX. SOFTWARE APPLICATION AND ACCESSIBILITY (SECTION 508 REHABILITATION ACT AND AMENDMENTS)

Software Application files, if delivered to the Government, shall conform to the requirements relating to accessibility as detailed to the 1998 amendments to the Rehabilitation Act, particularly, but not limited to, § 1194.21 Software applications and operating systems and § 1194.22 Web-based intranet and internet information and applications. See: <http://www.section508.gov/>

Preferred text format: MS Word, 8.0 or higher (Office 2007 or higher)
Preferred presentation format: Power Point, Office 2007 or higher
Preferred graphics format: Each graphic is an individual GIF file
Preferred portable format: Adobe Acrobat, version 6.0
All delivered products intended for external EPA use will require 508 compliance.

QUALITY ASSURANCE SURVEILLANCE PLAN for WSD's Mission Support Quality Assurance Surveillance Plan

The requirements contained in this WA are considered performance-based, focusing on the Agency's desired results and outcomes. The contractor shall be responsible for determining the most effective means by which these requirements will be fulfilled. In order to fulfill the requirements, the contractor shall design innovative processes and systems that can deliver the required services in a manner that will best meet the Agency's performance objectives. This performance-based requirement represents a challenge to the contractor to develop and apply innovative and efficient approaches for achieving results and meeting or exceeding the performance objectives, measures, and standards described in Attachment 4 of the contract. The Contractor's performance will be reflected in the positive or negative evaluation offered by the Agency in the Contractor Performance Evaluation (CPE) which is evaluated annually (per the "Contractor Performance Evaluation" clause in the contract). The WACOR shall submit a complete annual review of the areas outlined in the Quality Assurance Surveillance Plan (QASP), included in the contract, which will then be utilized by the CLCOR in preparing the overall evaluations submitted annually in response to the Contractor Performance Evaluation requirements in the contract.

EPAUnited States Environmental Protection Agency
Washington, DC 20460**Work Assignment**

Work Assignment Number

01-22

☐ Other☒ Amendment Number:

000001

Contract Number
EP-C-15-012

Contract Period 08/01/2015 To 07/31/2017

Title of Work Assignment/SF Site Name

Base Option Period Number 1

OGWDW Strategic Plan

Contractor
CSRA LLC

Specify Section and paragraph of Contract SOW

2.1, 2.15, 2.16

Purpose:

☐

Work Assignment

☐

Work Assignment Close-Out

☒

Work Assignment Amendment

☐

Incremental Funding

☐

Work Plan Approval

Period of Performance

From 08/01/2016 To 07/31/2017

Comments:

The purpose of this amendment 1 to CSC (EP-C-15-012) WA 01-22 is to add a Task 3 for NDWAC Note taking.

☐

Superfund

Accounting and Appropriations Data

☒

Non-Superfund

SFO
(Max 2)☐

Note: To report additional accounting and appropriations data use EPA Form 1900-69A.

Line	DCN (Max 6)	Budget/FY (Max 4)	Appropriation Code (Max 6)	Budget Org/Code (Max 7)	Program Element (Max 9)	Object Class (Max 4)	Amount (Dollars)	(Cents)	Site/Project (Max 8)	Cost Org/Code
1										
2										
3										
4										
5										

Authorized Work Assignment Ceiling

Contract Period:

Cost/Fee:

LOE: 370

08/01/2015 To 07/31/2017

This Action:

0

Total:

370

Work Plan / Cost Estimate Approvals

Contractor W/P Dated:

Cost/Fee

LOE:

Cumulative Approved:

Cost/Fee

LOE:

Work Assignment Manager Name Debbie Newberry

Branch/Mail Code:

Phone Number: 202-564-1415

FAX Number:

(Signature)

(Date)

Project Officer Name Nancy Parrotta

Branch/Mail Code:

Phone Number: 202-564-5260

FAX Number:

(Signature)

(Date)

Other Agency Official Name Erin Ridder

Branch/Mail Code:

Phone Number: 513-487-2155

FAX Number:

(Signature)

(Date)

Contracting Official Name Sandra Stargardt-Licis

Branch/Mail Code:

Phone Number: 513-487-2006

FAX Number:

(Signature)

(Date)

EPAUnited States Environmental Protection Agency
Washington, DC 20460**Work Assignment**

Work Assignment Number

01-22

☐ Other☒ Amendment Number:

000002

Contract Number

EP-C-15-012

Contract Period 08/01/2015 To 07/31/2017

Base

Option Period Number 1

Title of Work Assignment/SF Site Name

OGWDW Strategic Plan

Contractor

CSRA LLC

Specify Section and paragraph of Contract SOW

2.1, 2.15, 2.16

Purpose:

☐

Work Assignment

☐

Work Assignment Close-Out

☒

Work Assignment Amendment

☐

Incremental Funding

☐

Work Plan Approval

Period of Performance

From 08/01/2016 To 07/31/2017

Comments:

The purpose of this amendment 2 to CSRA (EP-C-15-012) WA 01-22 is to add a new task 4: Support for the update of the 2013 Roadmap to a secure and resilient water sector.

☐

Superfund

Accounting and Appropriations Data

☒

Non-Superfund

SFO

(Max 2)

☐

Note: To report additional accounting and appropriations data use EPA Form 1900-69A.

Line	DCN (Max 6)	Budget/FY (Max 4)	Appropriation Code (Max 6)	Budget Org/Code (Max 7)	Program Element (Max 9)	Object Class (Max 4)	Amount (Dollars)	(Cents)	Site/Project (Max 8)	Cost Org/Code
1										
2										
3										
4										
5										

Authorized Work Assignment Ceiling

Contract Period:

Cost/Fee:

LOE: 0

08/01/2015 To 07/31/2017

This Action:

245

Total:

245

Work Plan / Cost Estimate Approvals

Contractor W/P Dated:

Cost/Fee

LOE:

Cumulative Approved:

Cost/Fee

LOE:

Work Assignment Manager Name Debbie Newberry

Branch/Mail Code:

Phone Number: 202-564-1415

FAX Number:

(Signature)

(Date)

Project Officer Name Nancy Parrotta

Branch/Mail Code:

Phone Number: 202-564-5260

FAX Number:

(Signature)

(Date)

Other Agency Official Name Erin Ridder

Branch/Mail Code:

Phone Number: 513-487-2155

FAX Number:

(Signature)

(Date)

Contracting Official Name Donna Reinhart

Branch/Mail Code:

Phone Number: 513-487-2114

FAX Number:

(Signature)

(Date)

EPAUnited States Environmental Protection Agency
Washington, DC 20460**Work Assignment**

Work Assignment Number

01-25

☐

Other

☐

Amendment Number:

Contract Number

EP-C-15-012

Contract Period 08/01/2015 To 07/31/2017

Base

Option Period Number 1

Title of Work Assignment/SF Site Name

Engineering Support Assistance

Contractor

CSC GOVERNMENT SOLUTIONS LLC

Specify Section and paragraph of Contract SOW

Purpose:

☒

Work Assignment

☐

Work Assignment Close-Out

☐

Work Assignment Amendment

☐

Incremental Funding

☐

Work Plan Approval

Period of Performance

From 08/01/2016 To 07/31/2017

Comments:

In accordance with contract clause B.1 EPAAR 1552.211-74 Work Assignments (DEC 2014) Alternate III (DEC 2014) paragraph (c) the WA is authorized for IMMEDIATE START on August 1, 2016.

☐

Superfund

Accounting and Appropriations Data

☒

Non-Superfund

SFO
(Max 2)☐

Note: To report additional accounting and appropriations data use EPA Form 1900-69A.

Line	DCN (Max 6)	Budget/FY (Max 4)	Appropriation Code (Max 6)	Budget Org/Code (Max 7)	Program Element (Max 9)	Object Class (Max 4)	Amount (Dollars)	(Cents)	Site/Project (Max 8)	Cost Org/Code
1										
2										
3										
4										
5										

Authorized Work Assignment Ceiling

Contract Period:

Cost/Fee:

08/01/2015 To 07/31/2017

LOE: 0

This Action:

770

Total:

770

Work Plan / Cost Estimate Approvals

Contractor WP Dated:

Cost/Fee

LOE:

Cumulative Approved:

Cost/Fee

LOE:

Work Assignment Manager Name John McKernan

Branch/Mail Code:

Phone Number: 513-569-7415

FAX Number:

(Signature)

(Date)

Project Officer Name Nancy Parrotta

Branch/Mail Code:

Phone Number: 202-564-5260

FAX Number:

(Signature)

(Date)

Other Agency Official Name

Branch/Mail Code:

Phone Number:

(Signature)

(Date)

Contracting Official Name Donna Reinhart

FAX Number:

Branch/Mail Code:

Phone Number: 513-487-2114

(Signature)

(Date)

FAX Number:

STATEMENT OF WORK
Contract # EP-C-15-012 (CSC)
Work Assignment: WA-01-25

Work Assignment Contract Officer Representative (WACOR):

Name: John McKernan
Division: Land Remediation and Pollution Control Division,
National Risk Management Research Laboratory
Office: Office of Research and Development (ORD)
Phone: 513-569-7415
E-mail: mckernan.john@epa.gov
Mail code: MS 489A
Street Address: 26 W. Martin Luther King Dr.
City, State, Zip: Cincinnati, OH 45268

LOE: 770 hours

Engineering Support Assistance

A. PURPOSE:

The purpose of this work assignment (WA) is to establish an on-going contracting vehicle to satisfy EPA Office, Program, and Regional support needs related to surface water, ground water and related site issues that lead to safeguarding and securing our homeland security, as outlined in the requirements of the Water SSP, NIPP risk management framework, PPD-21, PPD-8, HSPD-9, and EO 13636.

To achieve this purpose, the contractor shall be expected to provide support for: review of site specific engineering reports and data; remedial designs; assessment of and development of recommended actions to solve remedial technology problems; conduct treatability studies; on-site evaluation of treatment technologies or site characteristics; evaluations of technical problems; analysis of treatability studies; technical reviews; engineering evaluations; "lessons learned" analyses; protective equipment; and development/provision of photographic and non production scale video documentation, presentation materials, technical writing services and technical meetings/presentations, as related to work under this contract.

The intended audience for this project is OSWER, OW, and the 10 EPA Regions.

This project supports programmatic support needs related to our national all hazards homeland security responsibilities by providing extensive technical support on surface water, ground water and related site remediation issues to Environmental Protection Agency (EPA) Offices, Programs, and Regions.

Other partners and external offices or agencies which should be included in coordination, and the nature of their involvement, are OSWER, OW, and the 10 EPA Regions.

This work assignment supports the mission of the Water Security Division (WSD) as described in the Water Security Strategy framework, which relates resources, activities, outputs, audience, short- and long- term outcomes to the WSD pillars of Prevention, Detection, Response, and Recovery. Additionally, this work assignment contributes to the commitments made in EPA's *Strategic Plan: 2011 to 2015* and EPA's *Homeland Security Strategy (2004)*. Under EPA's *Strategic Plan*, reference is made to Goal 2 (Clean and Safe Water), Objective 2.1 (Protecting Human Health), Sub-objective 2.1.1 (Water Safe to Drink), and to the Cross-Goal on homeland security. Under EPA's *Homeland Security Strategy*, reference is made to Objective 1 (Critical Infrastructure Protection).

In support of these requirements, this contract supports the nation's drinking and wastewater infrastructure, collectively known as the Water Sector, in being informed, coordinated, and prepared to prevent, detect, respond to, and recover from terrorist attack and other intentional acts, natural disasters, and other hazards (referred to as the "all hazards' approach), which may also occur, including the needs and challenges posed by natural disasters, catastrophic events, adaptation and impacts of climate change, floods, earthquakes, pandemic illness, and any other events which impact the safety and availability of our water supply.

In pursuit of these efforts, the contractor may be tasked with preparing a correlation summary comparing the results under this work assignment to the components of the Water Security Strategy framework.

B. BACKGROUND

The National Risk Management Research Laboratory (NRMRL) provides extensive technical support on surface water, ground water and related site remediation issues to Environmental Protection Agency (EPA) Offices, Programs, and Regions. NRMRL water and site remediation technical support is a high priority activity and is the prime focus of this statement of work. The goal of NRMRL engineering technical support is to provide high quality, practical technical support to its technical support clients within short time frames. The purpose of this work assignment (WA) is to establish an on-going contracting vehicle to satisfy EPA Office, Program, and Regional support needs related to surface water, ground water and related site issues that lead to safeguarding and securing our homeland security, as outlined in the requirements of the Water SSP, NIPP risk management framework, PPD-21, PPD-8, HSPD-9, and EO 13636.

Specific contract support areas being requested through this WA include:

- 1) Critical infrastructure protection (CIKR);
- 2) National response and recovery;
- 3) Agency communication, information, and program management support efforts; and
- 4) Additional, unforeseen related issues that may be critical to the Agency.

Due to the often quick turnaround required, the contractor must have the ability to assign reviewers and technical experts quickly, and be able to complete administrative paperwork within a 21-30 day working time frame.

C. QA REQUIREMENTS:

Subtask 3, Task 1 involve the collection and use of environmental data, and requires a QAPP. This may be primary data generated as a product of characterization, treatability, or modeling research conducted under the subtask, or secondary data obtained from literature or other sources which is used to support conclusions from research conducted under the subtask. Other subtasks in Task 1 (1 and 3) in this WA require the review or use of secondary data. A QAPP exists for this type of work, and will be shared with the contractor after award. Consistent with ORD Quality Assurance (QA) requirements, the contractor must prepare a Quality Assurance Project Plan (QAPP) for each research activity conducted as part of subtasks 2 and 4. Research data collection associated with site characterization sampling and analysis, treatability studies, and modeling cannot proceed until the contractor receives notification of QAPP approval from the Contract Level Contracting Officer's Representative (CL COR) via e-mail. The QA requirements must be addressed in the work plan and monthly progress reports as specified under Task 0, below.

The implementation of quality assurance requirements shall be determined according to the QA Category as defined by ORD PPM 13.7, "Use of the Graded Approach for QA of Research", and will be specified by the EPA WACOR in the technical directive (used to clarify work performed) for each subtask. Therefore, time and cost for preparing $\frac{3}{4}$ of the QAPPs at QA level B and $\frac{1}{4}$ at level A (the highest QA level) should be used in the cost estimate for the WA.

D. DETAILED TASK DESCRIPTION

Specific objectives for this work assignment are:

- 1) To provide NRMRL with technical support for evaluating and assessing treatment and remediation technologies for surface and ground water (and effected media) for the remediation of contaminated sites.
- 2) To provide fast turnaround technical reviews, documents and reports for site assessment/investigation and other written materials to provide EPA Office, Program and Regional clients.

- 3) Conduct research, development and evaluation of physical/chemical/biological processes to advance the state-of-the-art on contaminated surface water, ground water, and effected media to reduce risks to public health and the environment to acceptable levels.

The types of activities that the contractor and its subcontractors shall provide support for are: review of site specific engineering reports and data; remedial designs; assessment of and development of recommended actions to solve remedial technology problems; conduct treatability studies; on-site evaluation of treatment technologies or site characteristics; evaluations of technical problems; analysis of treatability studies; technical reviews; engineering evaluations; "lessons learned" analyses;; protective equipment; and development/provision of photographic and non-production scale video documentation, presentation materials, technical writing services and technical meetings/presentations, as related to work under this contract. It is estimated between 4 and 8 projects that fit in the subtasks below to be performed with the current LOE projected for this WA.

This work assignment consists of two tasks and four subtasks. The contractor will be notified electronically by the WACOR when technical support is required through the issuance of written technical direction. This written technical direction will be used to initiate the 4-8 projects estimated for this WA (i.e., the timing, and order of when to start the projects), and these 4-8 projects will all fit into one of subtasks in Task 1.

Each written technical direction will be formatted in a manner similar to the example form shown in Appendix A. In this written direction, the WACOR will provide the contractor with the schedule and any other particular details or information necessary to conduct selected Subtasks.

Under this WA, individual written Technical Direction (TD) shall be issued by the WACOR which will be electronically sent to the contractor's Project Manager as defined in the TD, with copies going to the EPA CO and Contract Level-Contract Officer Representative (CL-COR). These written TDs will provide an estimate of the work, labor hours and other direct costs to complete the work. The WACOR shall be responsible for approving Subtasks and shall notify the contractor's Project Manager, CL-COR, and CO, electronically. Work on Subtasks shall not begin until written technical direction is received and approved. Upon approval, (with copies to the CO and CL-COR), the contractor may continue working to the limits established (i.e., amount of LOE) under the work plan.

Exclusive Data Rights – Any and all data created, generated, or information construed due to the generation of data by parties paid under this WA are property of the U.S. EPA. Data or information created under this WA may not be used by parties other than the U.S. EPA without permission from the WACOR.

Citations or References - In work products (documents, reports, etc.) generated, the citation/referenced materials list must be available to the public, either freely or through purchase. When requested by EPA, the contractor must be prepared to compile and deliver cited/referenced materials upon delivery of work products. Cost of obtaining and aggregating these references will be at the EPA's expense. When copies of all references are needed, it will generally be indicated to the contractor before the work product is completed.

Peer-review - Contractor must be able to assemble and oversee an external peer-review process. Appropriate EPA forms for review will be supplied when this need arises. Usually external peer-review would consist of 1 EPA reviewer (not related to the work product) and 2 external reviewers, all without a COI. For cost estimating purposes, two (2) external peer-reviews for work products under Task 1, subtask 1 and 6 will be required.

Task 0. Preparation of the Work Plan

The contractor shall submit a work plan for the work assignment in accordance with the contract requirements.

In addition, the contractor shall prepare a PQAPP, considering the language and description provided in section C. QA Requirements, above. The PQAPP will be delivered before beginning any data collection. The monthly progress report shall indicate, in a separate QA section, whether significant QA issues have been identified and how they are being resolved. The WP shall explain when the PQAPP will be submitted based on the specific data requirements of the WA. Work on these tasks cannot proceed until the contractor receives notification of the new PQAPP approval from the CL COR via e-mail.

The contractor shall provide a copy of the technical and financial monthly report to the EPA CL-COR and WACOR as is required by the contract. Reports shall separately list the activities and status under each TD.

In each monthly progress report, the contractor shall, at the introduction to the discussion of this WA, discuss actual progress toward achieving the purpose of this work assignment, including problems encountered, issues that may need to be resolved, and anticipated timing for completing the goals of the WA. The contractor shall provide an overview of contract projects, striving to implement efficiencies in performance when complimentary requirements are issued. The contractor shall assure that duplication of effort relative to other ongoing WA under this contract is not occurring.

Deliverables: Work plan, monthly reports and PQAPP.

Task 1. Work Assignment Deliverables

The contractor shall provide the following services if requested by the WACOR in a written TD. If the contractor is not familiar with NRMRL technical support work, each of these subtasks is described in detail in Appendix B of this SOW.

The subtasks are:

Subtask 1: Technical Review of Documents

Subtask 2: Field Visits for Site Evaluation

Subtask 3: Assessment of Remediation Options

Subtask 4: Modeling

Each of these subtasks specifies the objective, technical approach and deliverables for the respective activity.

The contractor shall provide the WACOR with both hard copy and computerized/ electronic copy of all technical reviews conducted under the following subtasks. The WACOR will provide the contractor with a standard format for all these reviews which shall be adhered to in all Subtask 1 products.

Deliverables: Reports, summaries, or publications as described in the individual written TDs.

E. SCHEDULE/DELIVERABLES TABLE

GENERAL PRODUCT AND DELIVERABLE TIME LINES

Subtask	Name/Number	Due Dates/Time Lines
1	Technical Review of Documents (1-2)	Draft due between 2 weeks to 2 months after Work Plan approval, depending on complexity of review.
		Final due 2 weeks after draft review comments returned to contractor.
2	Field Visits for Site Evaluation (1-2)	Field visits will be conducted upon technical direction.
		Draft field visit report due 2 weeks after travel.

		Final due 2 weeks after draft review comments returned to contractor.
3	Assessment of Remediation Options (1-2)	
		Will be conducted upon technical direction. Draft due between 2 weeks to 2 months after Work Plan approval, depending on complexity of review.
		Final due 2 weeks after draft review comments returned to contractor.
4	Modeling (1-2)	Modeling will be conducted upon technical direction.
		Draft modeling reports due 2 weeks after completion, however may depend on complexity of study.
		Final due 2 weeks after draft review comments returned to contractor.

F. GREEN MEETINGS AND CONFERENCES

The contractor shall follow the provision of EPA prescription 1523.703-1, *Acquisition of environmentally preferable meeting and conference services (May 2007)*, for the use of off-site commercial facilities for an EPA event, whether the event is a meeting, conference, training session, or other purpose. Environmental preferability is defined at FAR 2.101, and shall be used when soliciting quotes or offers for meeting/conference services on behalf of the Agency.

G. CONFERENCES AND WORKSHOPS

The tasks under this work assignment may require the acquisition of "off-site" facilities for conferences and meetings as defined in the IPN 12-05. The events associated with this work assignment may be covered by EPA Order 1900.3 and could require EPA Form 5170. A determination of the number of participants and amount of EPA funds spent for any off-site conference or meeting would have to be determined, and the requirement for a 5170 form will be determined at that time.

The contractor shall immediately alert the WACOR to any anticipated event under the work assignment which may result in incurring an estimated \$20,000 or more cost, funded by EPA, specific to that event, meeting, training, etc. Those costs would include travel of both prime and consultant personnel, planning and facilitation costs, AV and rental of venue costs, etc. The EPA WACOR will then prepare for approval the internal paperwork for the event and will advise the contractor when appropriate signatures have been obtained. At that point, effort can proceed for the event. If the event is being sponsored by another EPA organization, the organization providing the planning is responsible for the approval.

Any event which meets the definition of a "conference," with total net expenditures greater

than \$20,000, is required to submit EPA Electronic Form 5170 and Form 5170-A (with cost estimates/actuals). In the case the workflow system is down and CORs require emergency approval, they can submit EPA Form 5170 (PDF) (2pp, 93K) (with cost estimates) to conference@epa.gov.

H. SOFTWARE APPLICATION AND ACCESSIBILITY (SECTION 508 REHABILITATION ACT AND AMENDMENTS)

Software Application files, if delivered to the Government, shall conform to the requirements relating to accessibility as detailed to the 1998 amendments to the Rehabilitation Act, particularly, but not limited to, § 1194.21 Software applications and operating systems and § 1194.22 Web-based intranet and internet information and applications. See: <http://www.section508.gov/>

Preferred text format:	MS Word, 8.0 or higher (Office 2007 or higher)
Preferred presentation format:	Power Point, Office 2007 or higher
Preferred graphics format:	Each graphic is an individual GIF file
Preferred portable format:	Adobe Acrobat, version 6.0

Delivered products will be required to comply with section 508 requirements.

I. QUALITY ASSURANCE SURVEILLANCE PLAN for WSD's Mission Support

Quality Assurance Surveillance Plan

The requirements contained in this WA are considered performance-based, focusing on the Agency's desired results and outcomes. The contractor shall be responsible for determining the most effective means by which these requirements will be fulfilled. In order to fulfill the requirements, the contractor shall design innovative processes and systems that can deliver the required services in a manner that will best meet the Agency's performance objectives. This performance-based requirement represents a challenge to the contractor to develop and apply innovative and efficient approaches for achieving results and meeting or exceeding the performance objectives, measures, and standards described in Attachment 4 of the contract. The Contractor's performance will be reflected in the positive or negative evaluation offered by the Agency in the Contractor Performance Evaluation (CPE) which is evaluated annually (per the "Contractor Performance Evaluation" clause in the contract). The WACOR shall submit a complete annual review of the areas outlined in the Quality Assurance Surveillance Plan (QASP), included in the contract, which will then be utilized by the CLCOR in preparing the overall evaluations submitted annually in response to the Contractor Performance Evaluation requirements in the contract.

J. APPENDICES:

Appendix A	Technical Direction Request Form (TD)
Appendix B	SOW Subtasks and Descriptions
Attachment 1	Standard Format/Checklist for NRMRL Site-Specific Technical Reviews

APPENDIX A

Technical Direction Form

CONTRACTOR: _____ **CONTRACT #** _____

TD #: _____ **Date:** _____

- 1.) **Site/Project**
- 2.) **Date:**
- 3.) **Region:**
- 4.) **Description of Subtask to be Performed: See Attached SOW**

Document or Information Provided by WACOR:

Deliverables and Due Dates:

- 5.) **Estimated Hours to Perform:**
- 6.) **Completion Date of SubTask:**
- 7.) **Source of Funds: ETSC Type of Funds: SF _____ RCRA _____ OTHER _____**
- 8.) **DCN for Funds:**
- 9.) **Special Instructions:**

For evaluation of potential conflict of interest, the PRPs at this site are:

The materials being reviewed were prepared by:

- 10.) **Attachments:**
- 11.) **Documents Sent:**
- 12.) **Additional Information Attached??**

Copies to: CL-COR, CO

APPENDIX B

SUBTASK 1. TECHNICAL REVIEWS OF DOCUMENTS

OBJECTIVE:

1) The Contractor shall perform an expert technical review of a document(s) prepared by other organizations pursuant to the preparation for or execution of remediation of hazardous waste sites.

The purpose of such reviews is to objectively identify and document the adequacy and completeness of the scientific and engineering aspects of the selection and implementation of remediation technologies and of other remediation activities. Particular attention shall be given to identifying major errors or omissions (related to the engineering aspects of the document) that, if not addressed, could significantly jeopardize the cost or effectiveness of the remediation effort. Normally, reviews are limited in scope to major issues resulting from expert review of the document, and cross-checking every detail presented in the document being reviewed is not required unless specifically requested as part of the site-specific task assignment.

2) The Contractor shall perform an expert technical review of non-site-specific documents with particular attention to errors or omissions of engineering aspects of the document.

Definition of Expert Reviews

The Contractor shall maintain a suitable level of remediation engineering expertise such that expert level reviews of site-specific documents can be conducted. Some of the elements that the contractor shall have expertise in include: engineering, sampling and analyses, and QA/QC developments in the field of remediation. Such expert knowledge shall include the advantages, limitations, performance, cost, data needs and implementation requirements of conventional, innovative and emerging remediation technologies; currently employed techniques (and policies) pertaining to specific types of sites; and currently employed sampling, analytical and QA/QC techniques for both field and laboratory applications. Reviews shall normally be conducted such that currently available data and information pertaining to the technologies or site types that are the subject of the site-specific document being reviewed shall be reflected in the review comments as appropriate, and shall be referenced as appropriate. For example, a review of a treatability study for soils washing shall be performed in accordance with the standard format/checklist noted below, and shall, as appropriate to substantiate key review conclusions, include references to key documents. Such documents shall, for example, describe applicable protocols for treatability testing, sampling, analysis and QA/QC, and the expected performance of the technology under the site-specific conditions being reviewed based upon the results of similar treatability studies at other sites.

Types of Documents to be Reviewed:

Documents to be reviewed shall be both site-specific and non site-specific. Site-specific documents shall pertain to Removal and Remedial Actions under the Comprehensive Environmental Response, Compensation & Liability Act (CERCLA), related actions under the Resource Conservation & Recovery Act (RCRA), or other similar actions under other cleanup authorities, such as State, Department of Energy (DOE) or Department of Defense (DOD), and shall include:

- 1) **Site investigation** materials such as Remedial Investigation Work Plans and Remedial Investigation Reports (draft or final), or similar documents, including all associated Sampling and Analytical (S&A) planning materials, Quality Assurance/Quality Control (QA/QC) planning materials, and completed samples and analyses with associated QA/QC materials.

- 2) **Feasibility Study** materials including Feasibility Study Work Plans, Feasibility Study Reports and Cost Estimates, or similar documents, including all associated S&A planning materials, QA/QC planning materials and completed samples and analyses with associated QA/QC materials. This category includes all types of documents associated with remedy selection, including ROD's and similar documents.
- 3) **Treatability Study** materials, including Treatability Study Work Plans and Treatability Study Reports, or similar documents, and including all associated S&A planning materials, QA/QC planning materials and completed samples and analyses with associated QA/QC materials.
- 4) **Remedial Design** materials, including Site Investigation Work Plans and Reports, Conceptual Design Reports, and similar documents, including all associated S&A planning materials, QA/QC planning materials and completed samples and analyses with associated QA/QC materials. This category includes all types of site-specific plans for implementing cleanup activities.
- 5) **Remedial Action** materials, including performance data, cost data and similar information appropriate to implementation of a remediation activity. This category includes implementation of any remediation, Removal Action or other execution of a remedy for a specific site. Special Reviews may also be requested by EPA on special documents or groups of documents. The nature of such Special Reviews will be identified in the Technical Directive (see paragraph below on Information Provided by EPA).

TECHNICAL APPROACH:

Reviews shall, where appropriate, be conducted in accordance with the Standard Format/Checklist for NRMRL site-specific reviews (see Attachment 1 below). The Format is intended to be used as a general guide by an expert reviewer to assure that certain basic information is included in the review, but is not intended to be all-inclusive. Should some aspect of the site-specific document require technically expert comment on an item that is not included in the Standard Format, but was requested in the site-specific Technical Directive, the reviewer shall provide the comments as appropriate. Where the Standard Format is not to be used, or is to be modified, specific direction will be provided by EPA in the site-specific work order to the Contractor, as noted below in the paragraph on Information Provided by EPA.

Note that Sections 1, 2 & 4 of the Standard Format are common to all types of reviews. Section 3 is presented in five different versions to reflect the differences among the basic types of reviews listed above. The contractor may be required to visit a site under certain circumstances to obtain information necessary to a review. Should a site visit be required, the contractor shall follow all applicable site visit procedures as noted in the Field Visits for Site Evaluation Subtask of the Technical Support Work Order.

DELIVERABLES:

Deliverables shall include an Engineering Technical Review and Transmittal Letter in hard copy and electronic formats. 1-2 Engineering Technical Review, Transmittal Letter, or memoranda may be developed. Deliverables may include visits to Regional, other EPA or Responsible Party offices, and presentation of oral reports or briefings that discuss the review results.

WA SPECIFIC INFORMATION PROVIDED BY EPA/WACOR:

EPA will provide the following specific information in the site-specific work order assignment (in addition to the items specifically listed on the site-specific assignment form):

- Which basic type of review (and review format) is being required (Site Investigation, Feasibility Study, Treatability Study, Remedial Design, Remedial Action), or if a Special Review is required, what are its specific characteristics and what format should be used for the review;
- What constraints or limitations are being placed on the review (e.g., particular focus of a review), what is the

relative emphasis among the various elements in the Standard Format for that particular type of document review, and any other modifications to the Standard Format for that type of review?

- What documents are being provided?
- What requirements are being made, if any, for a site visit; what is the purpose of the site visit; and all associated information as identified in the "Information Provided by EPA/TOM" section of the "Field Visits for Site Evaluation"?

SUBTASK 2

FIELD VISITS FOR SITE EVALUATION

OBJECTIVE:

- 1) To obtain a more comprehensive understanding of the appearance, layout, environs, topography, hydrology, history, use, and other background factors of a site by inspecting, photographing, and discussing a contaminated site by making a field visit to the site.
- 2) To visit a contaminated site, recommend sampling locations and possibly observe sample collection by others.
- 3) To observe and provide technical records, comments, or recommendations regarding sampling or treatment activities being conducted by others on a contaminated site.

TECHNICAL APPROACH:

The contractor shall only travel to and enter contaminated sites after receiving EPA approval for visiting a particular site. All personnel entering the site must have received and be current with health and safety training required by EPA and OSHA. The contractor shall provide and use all appropriate safety equipment in accordance with the site health and safety plan. The contractor shall be accompanied by the WACOR or his / her representative who is a trained EPA employee and certified contracting officer's representative (COR).

The contractor shall provide all equipment necessary to accomplish the specific objective (a., b., or c.). Contractor shall maintain records including a notebook documenting all significant on site activities and observations. When serving as a technical observer (objective 1. or 2.) the contractor shall notify the WACOR immediately (via telephone or fax) of recommended changes or critical problems observed and shall follow-up with a written report. The contractor has no authority to direct changes in work conducted by others on sites being visited. Most activities shall require a site visit of only one or two days. However, if tasked to provide a technical observer for activities conducted by others such as on site treatability studies or remedial action start up, the contractor may be required to be on site for one to three weeks.

DELIVERABLES:

Contractor deliverables will be specified in the TD and may include memoranda, brief letter reports, summary reports of information obtained from site visits or meetings including photographs or video tapes, recommendations supported by written reports, field notebooks, and other similar brief documentation of findings and recommendations. 1-2 memoranda, brief letter reports, summary reports or other similar brief documentation may be developed. Any photos, recordings, or other written or recordable material collected at the site should be included either in the site report, or as appendices or property to be submitted to the WACOR.

WA-SPECIFIC INFORMATION:

The WA will always provide the site name and location, objective of site visit, site access arrangements, and deliverables expected with due dates. Prior to the site visit EPA will also provide a summary of existing site conditions and hazards and information on site health and safety requirements along with other site background information useful in accomplishing the stated objective.

SUBTASK 3

ASSESSMENT OF REMEDIATION OPTIONS

OBJECTIVE:

The contractor shall evaluate the applicability of treatment technologies, containment and other remediation options for the site(s) based on site data and other information supplied by EPA, or obtained by the contractor through field assessments, the open literature or other sources. The contractor shall produce a product which describes the potential applicability of each of these technologies to the site(s). If requested, the contractor shall also recommend additional evaluations that need to be conducted to better determine the applicability of these options.

TECHNICAL APPROACH:

1) Evaluation/Collection of Available Data. The contractor shall review the material supplied by EPA which describes the site characteristics, clean-up goals, ARARs and other information (e.g. literature evaluations) pertinent to technology evaluation. The contractor shall conduct any required field evaluations according to the procedures specified in Subtask 2 of this SOW. The purpose of this review shall be to identify all information pertinent to evaluation of the remediation options.

2) Remediation Option Evaluation. The contractor shall determine based on the data available, published EPA remedial technology evaluation and selection guidance, and engineering judgement, the potential applicability of each of the remediation options specified by EPA. If the contractor believes that there are other options that should be evaluated, the contractor shall make this recommendation to EPA. EPA will evaluate such recommendations and, if appropriate, revise the task assignment. The contractor shall assess the pros and cons of applying each option to the site; including ability to reach clean-up goals; cost; implementation; reduction of toxicity, mobility, and volume; long- and short-term effectiveness; risk of application and any other factor identified by the WACOR. The contractor shall identify site characteristics and/or other site factors which make it appropriate to consider different technologies for different parts of the site and shall conduct the remedial option evaluation in a manner that clearly identifies how these factors influence the applicability of various options. The contractor shall also consider combinations of remediation options if these provide advantages over the use of individual options.

DELIVERABLES:

The contractor shall produce a document describing the options assessment. 1-2 options assessments may be developed. This document shall describe the rationale used in conducting the assessment and shall present a systematic evaluation of the applicability of the remediation options. If specified by EPA, the contractor shall make recommendations as to additional data collection and evaluations, or treatability studies that should be conducted to further clarify the applicability of remediation options to the site. If specified by EPA, the contractor shall make presentations in meetings on the results of this study according to deadlines specified by EPA.

WA-SPECIFIC INFORMATION PROVIDED BY EPA:

As part of each WA/MOD, the EPA will specify to the contractor what the sources of information are to be used in this evaluation. EPA will specify the technologies and other remediation options to be evaluated in the assessment, the deliverables to be provided by the contractor and deadlines to be met in completing the subtask. EPA will specify whether or not the contractor shall make recommendations on what additional studies/evaluations are needed to evaluate options. The site-specific task WW/MOD will also specify the level of effort to be spent by the contractor on this subtask as a whole and, if necessary, on individual parts of this subtask.

SUBTASK 4

MODELING

OBJECTIVE:

The objective of this subtask shall be to utilize existing models or create new models to evaluate physical/chemical/biological/ mechanical/ cost phenomena or uncertainties/issues associated with site remediation or to facilitate comprehension of large amounts of site-specific data and interactions that occur as contaminants have or may spread through the environment.

TECHNICAL APPROACH:

The contractor shall carry out the following activities:

- 1) Evaluate the problem and recommend the appropriate existing model(s), model adjustments, or development of new models, if appropriate. The WACOR will evaluate these recommendations and indicate to the contractor which models shall be acceptable to utilize and whether adjustments shall be made or new models created.
- 2) Evaluate available data for use in the model and recommend what additional data is needed to effectively use the model. The WACOR will evaluate these recommendations and, if appropriate, amend the task assignment to include collection and/or utilization of additional data by the contractor.
- 3) Use an existing model, the modified model or new model to perform the modeling of the physical/chemical/biological/ mechanical/cost phenomena or uncertainties/issues, and produce modeled results in the form of tables, charts, figures within a report. The report shall also evaluate the uncertainties associated with the modeled results, describe model validation efforts and, if requested, make recommendations concerning the data required to improve upon the modeled results. A quality assurance project plan (QAPP) may be required for this activity if data are used or generated in the modeling effort. Requirements for a contractor-prepared QAPP will be provided if data are used or generated in the modeling effort.

DELIVERABLES

1-2 models may be developed. Deliverables shall include the graphs, tables, figures and other forms of presentation of the modeled results. If requested, these shall be in the form of a written report and/or briefing(s) to the WACOR. If requested, this report shall include recommendations on data needed to improve modeled results. If an existing model is modified or a new model developed, the contractor shall provide copies of the model to the WACOR. The WACOR will review all deliverables and these shall be finalized per the WACOR's comments.

WA-SPECIFIC INFORMATION

In each TD the WACOR will specify the technical problems(s) to be evaluated and, if appropriate, the model(s) to be used in the evaluation. If known, the WACOR will specify the accuracy expected of the modeled evaluation; otherwise, the contractor shall make a recommendation and request the WACOR's concurrence. The WACOR will specify the time schedule and deliverables to be provided, including whether the contractor shall make formal recommendations about improvements that shall be made to the modeling process. The WACOR will specify the requirement for QA documentation necessary to implement research activity for this or other subtasks.

ATTACHMENT 1

STANDARD FORMAT/CHECKLIST FOR NRMRL SITE-SPECIFIC TECHNICAL REVIEWS

1.0 TRANSMITTAL LETTER

The Transmittal letter will serve as a record of transmittal of the Contractor's completed review report (hereafter called the "Review") of the site-specific document (hereafter called the "Document") from the Contractor to the EPA Task Order /Work Order Manager. The letter shall also address any significant side issues discovered by the reviewer which are not within the immediate scope of the work assignment, or specific issues that have not been discussed within the review by the reviewer. The reasons for these actions shall be stated briefly.

2.0 INTRODUCTION AND SUMMARY

The introduction and summary shall be a "stand alone" section after the cover page. This section shall summarize the Document, the WO and the Review, in that order, and shall be suitable for potential inclusion in a database covering NRMRL site-specific activities. The length shall be one to three paragraphs and principal conclusions and other key points shall be in "bullet" form.

The contractor shall perform the following:

- Identify the type of Document (from among the types listed above, e.g., treatability study work plan or remedial investigation draft report). Provide a brief overview/background of the Document. Identify site name, location, pertinent site characteristics, key contaminants, cleanup goals, volume of contamination and any other key information relevant to the review.
- Clearly identify the purpose and scope of the review as presented in the site-specific TD.
- Identify any tasks from the TD that are specifically addressed in the Review.
- Briefly list conclusions and recommendations from the Review. Be specific and direct with the intent to stand by your comments.

3.0 ANALYSIS OF TECHNICAL ISSUES

This section shall present a comprehensive and technically expert review and analysis of the technical issues that have prompted the request for expert assistance. These discussions shall provide explicit conclusions concerning each technical issue being addressed. Five specific types of analyses and considerations to be addressed by the contractor are listed below:

FOR REMEDIAL INVESTIGATION MATERIALS:

3.1.1 Technology Applicability

- What are the contaminants of concern and preliminary cleanup goals for this site? For other similar sites?
- What technologies are potentially applicable to the site?
- What technologies have been used for similar sites elsewhere?

3.1.2 Analysis of Technology-Related Data Needs

- What are the data needs for each of these potentially applicable technologies?
- Is (will) adequate data (be) available to make preliminary judgement for technology applicability?
- Are the correct parameters being measured?
- Will the number and location of samples be the minimum to be sufficiently representative of the site variability regarding contaminant types, contaminant concentrations and matrix types?
- Are samples being taken to identify potential implementation concerns for the technologies being considered? Should such samples be taken now?
- Are adequate types and locations of samples being taken from which to make reasonably accurate estimates of volumes of various types of contaminated matrices?
- For Remedial Investigation (RI) Work Plans: would a two phased approach involving first screening for extent and type of contamination, and a later, more complete investigation, be appropriate? If it is being planned, is it being planned adequately? What weaknesses, if any, are present in the plan?

FOR FEASIBILITY STUDY MATERIALS:

3.2.1 Appropriateness of Technologies

- Was adequate site characterization information included to enable you to make judgements on the suitability of candidate technologies?
- What information is missing and what is the implication of that missing information?
- If a remedy selection decision must be made without getting the additional information, will this have major or minor effect on the uncertainties of the decision? If a major effect, could the

information be obtained Post-Record of Decision (ROD)? Could a bi-headed ROD be used to "back up" the decision with a known approach?

- Were all potentially appropriate technologies included in the initial screening?
- Were treatment trains or other combinations of technologies used appropriately?
- Were innovative remediation technologies given appropriate opportunity for evaluation?
- Were any appropriate technologies omitted? What technology and why appropriate?

3.2.2 Evaluation of Technologies

Was each technology treated accurately regarding expected performance and cost for the site-specific situation?

Are the cleanup goals clearly identified for each matrix to be remediated?

Are these goals consistent with other sites of similar type?

If the cleanup goals are significantly different from other sites of similar type, does this have significant technology selection and cost implications? (Caution: the purpose here is not to comment on the appropriateness of the goals for the site, only to identify comparisons between the subject site and similar sites).

Was correct data used to draw conclusions? Was a treatability study used for data acquisition purposes? If not, was the data that was used accurate and of sufficient quality for remedy selection?

If a remedy selection decision must be made without getting the additional data, will this have major or minor effect on the uncertainties of the decision? If a major effect, could the information be obtained post-ROD? Could a bi-headed ROD be used to "back up" the decision with a known approach?

If a treatability study was performed, refer to the Standard Format for Treatability Study Materials, below, for the review pattern.

Is the conclusion of the feasibility study adequately supported by the data and information presented? If not, why not?

FOR TREATABILITY STUDY MATERIALS:

3.3.1 Assessment of Technology Applicability

- Discuss general applicability of the technology to the site, including potential advantages and limitations.
- Do any site conditions constitute a limitation for applying the technology?

- Is the technology being planned for appropriate application, such as in a treatment train? If not, identify weaknesses of planned application and consequences.

3.3.2 Site Sample Requirements

- Is adequate site characterization data available? If not, identify missing data and consequences of not having the information. Comment on the representativeness of the site (solids or liquids) sample(s) used during the treatability study. Are variability of contaminant concentration, contaminant type and matrix adequately represented by the sample(s)? Are samples "Worst Case" or "Average?" Was the choice appropriate?
- Were samples collected, containerized, transported and stored in accordance with an appropriate approach considering the site-specific conditions?

3.3.3 Treatability Study Test Design

- Goal or reason for the test. Are goals clearly stated? If not, what goals are assumed to evaluate the study? Will the tests be able to how whether the goals are achievable? Are modifications required to enable the tests to achieve the goals and purpose?
- Identify the parameters to be measured. Are all major parameters covered in the test design? If so, say so and back your conclusions. If not, indicate missing parameters and discuss why measurements are required.
- Is the Sampling and Analytical Plan appropriate and based on acceptable protocols?
- Are standard testing protocols specified? Is the correct protocol specified? If a non standard protocol is specified, does the document adequately justify its use? Are specified QA/QC levels adequate to meet the study goals? Provide information to back your conclusions. (A detailed QA/QC review is not to be done. Such a review, if required, will be conducted by EPA or an EPA QA/QC contractor.)

3.3.4 Conclusions of Treatability Study Test

- Analysis of test conclusions (including vendor tests)
- Express agreement or disagreement with (vendor's) conclusions and present reasons for your position.
- Cite any existing appropriate public domain data and compare it to test data. Highlight discrepancies and discuss reasons for discrepancies.
- Avoid general critique of an individual vendor's process. If a problem is characteristic of the technology generalize your critique to the overall type of technology. However, if a specific technical feature of the vendor's process causes an identifiable effect, that is not necessarily characteristic of the technology in general, that feature shall be identified if necessary to draw a conclusion.
- Need for further testing to select technology. List further testing requirements and justify the recommendation. If the additional tests are not conducted, and it is necessary to make a final technology selection based upon the data

at hand, what are the uncertainties or risks to such a decision. Minor? Major?

FOR REMEDIAL DESIGN MATERIALS:

3.1 Evaluation of Data Needs for Technology Implementation

- Will sufficient data, regarding representativeness and variability be available to adequately characterize the site for purposes of implementation? If not, what additional information is needed and why?
- If the Remedial Design involves obtaining additional field data, refer to the Standard Format for Remedial Investigation Reviews, above.
- If the Remedial Design involves a treatability study (including a Trial Burn or other proof-of-performance test), refer to the Standard Format for Treatability Study Reviews, above.
- What special recommendations do you have for a remedy design treatability study for this site?

3.2 Design Reviews

- What major errors or omissions are present that, if not addressed, would have serious consequences on the implementation of the remediation?
- What other errors or omissions are present that have come to your attention during your review that shall be brought to the attention of the designers?

FOR REMEDIAL ACTION MATERIALS:

Review of a remedial action, such as an operations review to uncover operational problems, would normally involve a document review stage and a site-visit stage. The document review stage may involve the review of previously-conducted site investigations, treatability studies and/or design materials. In each case, the reviewer shall refer to the Standard Format as appropriate and use judgement as to which questions are appropriate.

The goal of a remedial action document review shall be to identify documented site characteristics or treatability information that could be particularly relevant to the operating problems being experienced, and to provide adequate background information for personnel planning a field visit.

4.0 REFERENCES

List guidance documents, technical bulletins, reports, journal articles, etc.

EPAUnited States Environmental Protection Agency
Washington, DC 20460**Work Assignment**

Work Assignment Number

01-26

☐ Other☐ Amendment Number:

Contract Number

EP-C-15-012

Contract Period 08/01/2015 To 07/31/2017

Base

Option Period Number 1

Title of Work Assignment/SF Site Name

Support for Fish Contam Survei

Contractor

CSRA LLC

Specify Section and paragraph of Contract SOW

2.8, 2.15, 2.16, 2.17, 3.1.4, 3.1.5, 3.1.13, 3.1

Purpose:



Work Assignment



Work Assignment Close-Out



Work Assignment Amendment



Incremental Funding



Work Plan Approval

Period of Performance

From 10/19/2016 To 07/31/2017

Comments:

The WA is authorized for immediate start. If the work plan is not approved within 35 days from the issue date of the WA the contractor shall stop work.



Superfund

Accounting and Appropriations Data



Non-Superfund

SFO

(Max 2)



Note: To report additional accounting and appropriations data use EPA Form 1900-69A.

Line	DCN (Max 6)	Budget/FY (Max 4)	Appropriation Code (Max 6)	Budget Org/Code (Max 7)	Program Element (Max 9)	Object Class (Max 4)	Amount (Dollars)	(Cents)	Site/Project (Max 8)	Cost Org/Code
1										
2										
3										
4										
5										

Authorized Work Assignment Ceiling

Contract Period:

Cost/Fee:

LOE: 0

08/01/2015 To 07/31/2017

This Action:

4,000

Total:

4,000

Work Plan / Cost Estimate Approvals

Contractor WP Dated:

Cost/Fee

LOE:

Cumulative Approved:

Cost/Fee

LOE:

Work Assignment Manager Name Leanne Stahl

Branch/Mail Code:

Phone Number: 202-566-0404

FAX Number:

(Signature)

(Date)

Project Officer Name Nancy Parrotta

Branch/Mail Code:

Phone Number: 202-564-5260

FAX Number:

(Signature)

(Date)

Other Agency Official Name Erin Ridder

Branch/Mail Code:

Phone Number: 513-487-2155

FAX Number:

(Signature)

(Date)

Contracting Official Name Donna Reinhart

Branch/Mail Code:

Phone Number: 513-487-2114

FAX Number:

(Signature)

(Date)

**WORK ASSIGNMENT
PERFORMANCE WORK STATEMENT (PWS)**

Contract No. EP-C-15-012

Work Assignment: WA-01-26

WACOR: **Name:** Leanne Stahl _____
 Branch: National Branch _____
 Division: Standards and Health Protection Division _____
 Office: Office of Science and Technology (OST) _____
 Phone: 202-566-0404 _____
 FAX: 202-566-0409 _____
 E-mail: stahl.leanne@epa.gov _____
 Mail code: 4305T _____
 Street Address: 1200 Pennsylvania Ave NW _____
 City, State, Zip: Washington, DC 20460 _____

Alt WACOR: **Name:** Elizabeth Murphy _____
 Branch: Great Lakes Remediation and Restoration
 Section: Science, Monitoring, Evaluation and Reporting
 Section (Division not applicable for GLNPO) _____
 Office: Great Lakes National Program Office _____
 Phone: 312-353-4227 _____
 FAX: 312-385-5477 _____
 E-mail: murphy.elizabeth@epa.gov _____
 Mail code: G17J _____
 Street Address: 77 West Jackson Boulevard _____
 City, State, Zip: Chicago, IL 60604-3507 _____

LOE: 4000 hours

Period of Performance: Date of Work Assignment Issuance to July 31, 2017

Title: Support for Fish Contamination Surveillance

PWS Sections: 2.8, 2.15, 2.16, 2.17, 3.1.4, 3.1.5, 3.1.13, 3.1.19 _____

I. PURPOSE:

The purpose of this work assignment is to provide scientific, technical, quality assurance (QA), and logistical support to the Office of Water's Office of Science and Technology (OST) and the Great Lakes National Program Office to detect and identify threats to national water resources and human health by supporting surveillance monitoring of contaminants of concern in surface

waters throughout the United States, focusing on rivers and the Great Lakes. To achieve this purpose, the contractor shall be expected to provide logistical support for fish sample collection; to secure, coordinate, and monitor laboratory services for preparation and analysis of fish tissue samples for new and ongoing projects; to complete QA review of the analytical data received from multiple laboratories; to manage and store the analytical and related field data for each project; to prepare and review files for statistical analysis of analytical data and to conduct statistical analysis of analytical data; to review and provide support for development of reports and outreach materials related to the analysis of fish tissue for contaminants of concern; and to provide technical support for a variety of other activities related to surveillance monitoring for contaminants of concern in fish.

The intended audience for these surveillance monitoring projects includes states and other participants in EPA's National Rivers and Streams Assessments (NRSAs) and National Coastal Condition Assessments (NCCAs). These projects support programmatic support needs related to our national all hazards homeland security responsibilities by providing the first statistically representative toxic chemical baseline data for U.S. rivers and for the Great Lakes and subsequent sets of statistically representative toxic chemical data to assess trends in the occurrence of toxic chemical levels in fish, and to evaluate the effectiveness of policies, programs, and tools to protect and enhance the quality and security of water resources in rivers and the Great Lakes related to human health. This work assignment also contributes to the commitments made in EPA's *Strategic Plan*, which references Goal 2 (Clean and Safe Water), Objective 2.1 (Protecting Human Health), Sub-objective 2.1.1 (Water Safe to Drink).

In support of these requirements, this contract supports the nation's drinking and wastewater infrastructure, collectively known as the Water Sector, in being informed, coordinated, and prepared to prevent, detect, respond to, and recover from terrorist attack and other intentional acts, natural disasters, and other hazards (referred to as the "all hazards" approach), which may also occur, including the needs and challenges posed by natural disasters, catastrophic events, adaptation and impacts of climate change, floods, earthquakes, pandemic illness, and any other events which impact the safety and availability of our water supply.

In pursuit of these efforts, the contractor may be tasked with preparing a correlation summary comparing the results under this work assignment to the components of the Water Security Strategy framework.

II. BACKGROUND:

OST within EPA's Office of Water conducts studies that identify and assess the levels of chemical threats to surface water quality and human health in U.S. waters using fish tissue as an indicator of water quality. In the Great Lakes, OST partners with EPA's Great Lakes National Program Office (GLNPO) to conduct these statistically based fish tissue studies. Since 1998, OST and GLNPO (for Great Lakes fish tissue studies only) have initiated the following fish tissue studies (in reverse chronological order):

- 2015 National Coastal Condition Assessment (NCCA) Great Lakes Human Health Fish

Fillet Tissue Study (2015 GLHHFFTS)

- 2013-14 National Rivers and Streams Assessment (2013-14 NRSA)
- 2010 NCCA Great Lakes Human Health Fish Tissue Study (2010 GLHHFFTS)
- 2008-2009 National Rivers and Streams Assessment (2008-09 NRSA)
- 2006 Pilot Study of Pharmaceuticals and Personal Care Products (PPCPs) in Fish Tissue (PPCP Fish Pilot Study)
- 2000-2003 National Study of Chemical Residues in Lake Fish Tissue (National Lake Fish Tissue Study or NLFTS)

In 2014, EPA began planning for the second surveillance monitoring effort in the Great Lakes, which is designated as the 2015 Great Lakes Human Health Fish Fillet Tissue Study or 2015 GLHHFFTS. These Great Lakes surveillance monitoring efforts are scheduled at five-year intervals under EPA's National Coastal Condition Assessment. The 2015 GLHHFFTS provides the first opportunity for EPA to develop probability-based temporal trends data for contaminants of concern in Great Lakes fish by comparing data sets on the chemical concentrations in fillet tissue samples generated for the 2015 GLHHFFTS and the 2010 GLHHFFTS. Fish samples for this study were collected at 153 nearshore sampling sites in the five Great Lakes primarily during the summer and fall of 2015. The last five fish samples were collected from sites in Lake Michigan during May 2016. Fillet tissue samples are being analyzed for the following contaminants: mercury, PCBs, perfluorinated compounds (PFCs), dioxins/furans, and some additional contaminants of emerging concern. The tasks remaining for this ongoing study include completion of the fillet tissue analysis, quality assurance (QA) review of the analytical data, statistical analysis of the fillet concentration data, and data reporting.

The 2013-14 NRSA provides the first opportunity to develop probability-based temporal trends data for contaminants of concern in fish from U.S. rivers when compared to chemical data in fish tissue generated for the 2008-09 NRSA. Fish samples were collected from 361 river reaches in the lower 48 states during the spring and summer months of 2013 and 2014. EPA analyzed fillet tissue samples from all 361 sites for mercury, from 352 sites for PFCs, and from a subset of 224 sites where fish tissue samples were previously collected during the 2008-09 NRSA for polychlorinated biphenyls (PCBs). The final task remaining for this study is data reporting.

The 2010 GLHHFFTS involved the first probability-based surveillance monitoring for contaminants of concern in fillets of Great Lakes fish from 157 nearshore sites sampled in the five lakes during 2010. Fillet tissue samples were analyzed for mercury, PCBs, PBDEs, and PFCs. Results from this study will establish a statistically representative baseline for assessing threats to the quality and security of Great Lakes water resources. EPA will complete data reporting for this study in 2017.

The 2008-09 NRSA was the first probability-based assessment of the levels of contaminants of concern in fish from U.S. rivers. It involved collection of fish from 542 river reaches in the lower 48 states during 2008 and 2009. Fillet tissue samples were analyzed from all the sites for mercury, selenium, PCBs, PBDEs, and pesticides and from only the 163 urban river sites for PFCs. Results from this study provide the first statistically representative national chemical

baseline data for identifying threats to the quality and security of U.S. rivers. Data reporting is still underway for this study.

EPA developed the PPCP Fish Pilot Study to assess the threats these contaminants of emerging concern may pose to surface water quality and human health. In 2006, fish samples were collected from one reference site in New Mexico and effluent-dominated streams just below wastewater treatment plant discharges at five urban sites across the country (Chicago, Dallas, Orlando, Phoenix, and West Chester, a suburb of Philadelphia). Fillet and liver samples were analyzed for 24 pharmaceuticals, and fillet samples only were analyzed for 12 personal care products. Release of the final EPA technical report for this study is pending.

The National Lake Fish Tissue Study was EPA's first probability-based assessment of chemical threats to U.S. water resources on a national scale. It involved collection of two types of fish samples (predators and bottom dwellers) from 500 lakes and reservoirs in the lower 48 states from 2000 through 2003. Predator fillet samples and bottom-dweller whole fish tissue samples were analyzed for mercury, arsenic, PCBs, dioxins and furans, pesticides, PBDEs and semivolatile organic compounds (e.g., polycyclic aromatic hydrocarbons or PAHs). The final technical report for all chemicals except the PBDEs was released in 2009, and an article reporting the PBDE data was published in 2013. Tasks for this study will focus on long-term data management, response to data requests, and preparation of final disposition and storage of project records and sample archives.

III. QA REQUIREMENTS:

Some carryover activities under Task1 (Support for Surveillance Monitoring of Contaminants of Concern in U.S. Waters) of this performance work statement (PWS) require quality assurance (QA). Collection, use, and analysis of data for carryover 2015 Great Lakes Human Health Fish Fillet Tissue Study (GLHHFFTS) activities (such as QA review of PCB and PFC data) will be identical to the procedures described in the Project-Specific Quality Assurance Project Plan (PQAPP) completed for Task 2 of WA 4-009 under EPA Contract No. EP-C-12-008, consistent with the Agency's QA requirements, appending the Contract Quality Assurance Project Plan (QAPP). The title of this existing PQAPP is *Sample Preparation and Analysis for the 2015 National Coastal Condition Assessment Great Lakes Human Health Fish Fillet Tissue Study, Revision 2, June 2, 2016*. The project specific QA requirements for these Task 1 carryover activities must be addressed in the monthly progress reports as specified under Task 0 below.

Some new analytical activities to be conducted under Task 1 of the PWS require QA. These activities include chemical analysis of the 2015 GLHHFFTS fillet tissue samples for dioxins/furans and selected CECs under sub-task 1.2 (Laboratory Services Support) and QA review of the dioxin/furan and CEC analytical and quality control (QC) data under sub-task 1.3 (Data Review and Other QA Support). Consistent with the Agency's QA requirements, the contractor must prepare PQAPP revisions for new 2015 GLHHFFTS analytical activities as described under Task 1, sub-task 1.2, including:

- A revision of the current PQAPP that describes QA requirements for dioxin/furan

analysis of 2015 GLHHFFTS fillet tissue samples (sub-task 1.2) and for QA review of the 2015 GLHHFFTS dioxin/furan analytical and associated QC data (sub-task 1.3)

- Further revision of the PQAPP that describes QA requirements for CEC analysis of 2015 GLHHFFTS fillet tissue samples (sub-task 1.2) and for QA review of the 2015 GLHHFFTS CEC analytical and associated QA data

Work on the new Task 1 analytical activities listed above for each PQAPP revision cannot proceed until the contractor receives notification of PQAPP revision approvals from the Contract Level Contracting Officer Representative (CLCOR) via email. The QA requirements must be addressed in the work plan in response to the PQAPP development specifications described in Task 1, sub-task 1.2 of this PWS and in monthly progress reports as specified in Task 0 below.

In addition, some activities under Task 3 (Support for Evaluation of Fish Tissue Sampling Methods for Contaminant Monitoring) of this PWS require QA. These activities include chemical analysis of the fish plug evaluation study fillet tissue samples for mercury and selenium under sub-task 3.2 (Laboratory Services Support) and QA review of the mercury and selenium analytical and QC data under sub-task 3.3 (QA Support). Consistent with the Agency's QA requirements, the contractor must prepare a Project-Specific Quality Assurance Project Plan (PQAPP) for these analytical activities as described under Task 3, sub-task 3.2, which specifies incremental development of the PQAPP in the following three stages:

1. An initial analytical activities PQAPP that describes QA requirements for fish plug evaluation study fillet tissue sample preparation and for QA review of any related QC data.
2. Revision of the initial analytical activities PQAPP that describes QA requirements for mercury analysis of fish plug evaluation study fillet tissue samples (sub-task 3.2) and for QA review of the fish plug evaluation study mercury analytical and associated QC data (sub-task 3.3).
3. Revision 2 of the initial analytical activities PQAPP that describes QA requirements for selenium analysis of fish plug evaluation study fillet tissue samples (sub-task 3.2) and for QA review of the fish plug evaluation study selenium analytical and associated QC data (sub-task 3.3).

Work on the analytical activities listed above for each stage of PQAPP development cannot proceed until the contractor receives notification of PQAPP approval and subsequent PQAPP revision approvals from the Contract Level Contracting Officer Representative (CLCOR) via email. The QA requirements must be addressed in the work plan in response to the PQAPP development specifications described in Task 3, sub-task 3.2 of this PWS and in monthly progress reports as specified in Task 0 below.

IV. STATEMENT OF WORK

All direction under this WA will be provided as written technical direction from the WACOR, Alternate WACOR, or Task Manager (TM), as appropriate. If provided first as verbal technical direction to the contractor, it will be confirmed in writing within 5 calendar days, with a copy to

the Contract Level Contracting Officer's Representative (CLCOR) and the Contracting Officer (CO), and is subject to the limitations of the technical direction contract clause. Each initial deliverable shall be provided to the EPA WACOR and EPA CL COR in draft form for review and comment. The contractor shall incorporate WACOR/TM review comments into revisions of the drafts. All drafts and final reports shall be approved by the WACOR.

The contractor shall perform the following tasks:

Task 0: Work Plan and Monthly Progress Reports

The contractor shall develop a work plan that describes how each task will be carried out. The work plan shall include a schedule, staffing plan, level of effort (LOE), and cost estimate for each task, the contractor's key assumptions on which staffing plan and budget are based, and qualifications of proposed staff. If a subcontractor(s) is proposed and subcontractors are outside the local metropolitan area, the contractor shall include information on plans to manage work and contract costs.

For carryover Task 1 activities, the contractor shall prepare a statement indicating that these WA activities are a continuation of work conducted for WA 4-009 under EPA Contract No. EP-C-12-008. The work plan shall explain that collection, use and analysis of data in this work assignment will be identical to the procedures described in the existing 2015 GLHHFFTS PQAPP completed for Task 2 of WA 4-009 under EPA Contract No. EP-C-12-008. For new Task 1 analytical activities, the contractor shall prepare revised PQAPPs as listed above and specified in Task 1, sub-task 1.2. Work on these new Task 1 analytical activities cannot proceed until the contractor receives notification of approval of each revised PQAPP from the CLCOR via e-mail.

For Task 3, the contractor shall prepare a PQAPP and subsequent PQAPP revisions for applicable analytical activities as noted above and described in Task 3, sub-task 3.2. The contractor shall follow the QA requirements specified in the PQAPP and PQAPP revisions to ensure the quality of primary data used to complete the applicable Task 3 analytical activities. Work on the applicable Task 3 analytical activities cannot proceed until the contractor receives notification of approval of the PQAPP and of each subsequent PQAPP revision from the CLCOR via e-mail.

This task also includes monthly progress and financial reports. The monthly progress report shall indicate, in a separate QA section, whether significant QA issues have been identified and how they are being resolved. Monthly financial reports must include a table with the invoice LOE and costs' broken out by the tasks in this WA.

Deliverables: Work plan, monthly progress and financial reports, Checklist for Quality Assurance Project Plans, and Summary of Quality Assurance Activities and Issues by Work Assignment **[NOTE:** 2015 GLHHFFTS revised analytical activities PQAPPs are listed as

deliverables under Task1 and the Fish Plug Evaluation Study PQAPP and revised PQAPPs are

listed as deliverables under Task 3.]

Task 1: Support for Surveillance Monitoring of Contaminants of Concern in U.S. Waters

The contractor shall provide support to characterize baseline levels of contaminants of concern and trends in contaminant levels in fish from U.S. rivers and the Great Lakes. This support will assist EPA in identifying contaminants that may be adversely impacting the quality and security of water resources important for human health, including the quality of source waters for drinking water and the level of contamination in fish species commonly consumed by humans. Support for this task will focus on planning fish sample collection for the 2018-19 NRSA; on chemical analysis of fish fillet tissue samples for the 2015 GLHHFFTS under the NCCA; on QA review of 2015 GLHHFFTS fillet tissue data; on fish tissue study data management; and on statistical analysis of fish tissue chemical data. The 2015 GLHHFFTS is the second statistically representative study of toxic chemical residues in Great Lakes fish, and the 2018-19 NRSA is the third statistically representative study of toxic chemical residues in fish from U.S. rivers. Fish fillet data from these studies will allow EPA to characterize temporal trends in the contaminant levels measured in Great Lakes fish when compared to fish fillet results from the 2010 GLHHFFTS and in river fish when compared to fish fillet results from the 2013-14 NRSA. Contractor support for this task will consist of a broad range of activities for the new 2018-19 NRSA and for the 2015 GLHHFFTS and other ongoing EPA fish tissue studies, including field sampling support, laboratory services support, data review and other QA support, data management support, and data analysis support. Specific activities to be performed under this task are described in sub-tasks 1.1 through 1.5.

1.1 Field Sampling Support

The contractor shall provide support for fish tissue study planning and for preparing materials related to the collection and shipment of fish tissue study samples under the 2018-19 NRSA.

This support consists of, but is not limited to, the following:

- planning the fish tissue monitoring study design and the logistics to implement this study
- obtaining fish sampling supplies for distribution to field crews conducting field sampling at the 2018-19 NRSA river sites designated for whole fish sampling (e.g., solvent-rinsed sheets of heavy-duty foil for wrapping individual fish in each sample and coolers for shipping the fish samples)
- updating field sampling procedures, including procedures for shipping whole fish samples from field locations to the designated laboratory (for interim storage or for fish sample preparation, as applicable) and procedures for coordinating and tracking shipment of whole fish samples collected during the upcoming NRSA field sampling seasons in 2018 and 2019

The contractor shall provide support for planning the fish tissue monitoring study design and the logistics to implement the fish tissue study to be conducted under the 2018-19 NRSA. EPA anticipates that the 2018-19 NRSA study design for core indicators will be completed by the Agency's Office of Research and Development and circulated to study participants during the fall of 2016. The contractor shall review this larger study design and shall provide support for

identifying an appropriate subset of 2018-19 NRSA river sites to be sampled for the fish tissue study and for planning logistics to conduct the fish tissue study.

The contractor shall obtain field sampling supplies for the 2018-19 NRSA fish tissue study, including solvent-rinsed sheets of heavy-duty foil for wrapping individual fish specimens in each sample and coolers for shipping fish samples. The contractor shall obtain and monitor laboratory services to prepare and deliver up to 1500 sheets of solvent-rinsed heavy-duty foil using the same foil preparation protocols (e.g., foil sheet dimensions, type of solvent, solvent-rinsed foil baking temperature and duration, folding and bagging procedures for the treated sheets of foil, etc.) that were applied in preparing solvent-rinsed foil sheets for ongoing fish tissue studies (e.g., the 2013-14 NRSA fish tissue study and the 2015 GLHHFFTS) under a previous work assignment (WA 4-21 under EPA Contract No. EP-C-10-060). It is critical that the laboratory prepare the solvent-rinsed foil sheets using heavy-duty foil for durability of the sheets during field sampling operations. In addition, the contractor shall obtain up to 20 coolers to increase the cooler supply available for shipping 2018-19 NRSA whole fish samples. The contractor shall provide coolers of the same brand, color, and size as the coolers currently available for transporting and shipping the 2018-19 NRSA fish samples. The WACOR will provide cooler specifications to the contractor.

The contractor shall provide support for updating existing field sampling procedures to be applied in the collection, handling, and shipping of whole fish samples for the 2018-19 NRSA fish tissue study. This support will consist of furnishing relevant 2018-19 NRSA project-specific information to be incorporated into field sampling procedures developed for the 2013-14 NRSA to prepare updated procedures for field sampling crews to use in collecting whole fish samples for the 2018-19 NRSA fish tissue study.

Deliverables: Fish sampling supplies; updated information for 2018-19 NRSA field sampling procedures related to collection, handling, and shipment of whole fish samples.

1.2 Laboratory Services Support

The contractor shall provide technical and logistical support for planning, securing, coordinating, and monitoring laboratory services for analysis of 2015 GLHHFFTS fillet tissue samples for contaminants of concern, including dioxins and furans and contaminants of emerging concern (CECs) identified in Great Lakes fish by EPA's Great Lakes National Program Office (GLNPO). The contractor shall provide laboratory services support that includes, but is not limited to, the following activities:

- defining laboratory requirements
- determining laboratory competency in order to be a qualified laboratory, in addition to evaluating laboratory capabilities to meet any other requirements leading to qualification of laboratories for each type of chemical analysis
- preparing and distributing analytical statements of work (SOWs) to qualified laboratories
- evaluating responses to the SOWs to secure laboratory services from an experienced laboratory with demonstrated technical qualifications for each type of chemical analysis

- preparing revisions to the existing 2015 GLHHFFTS analytical activities QAPP to include required information for dioxin and furan analysis and for analysis of other to be determined (TBD) CECs
- coordinating shipments of fish fillet tissue samples for analysis
- maintaining continuous oversight of laboratory work performance
- developing formats for data reporting
- providing ongoing support to furnish a secure and properly maintained freezer facility for long-term storage of archived fish tissue samples from the series of EPA fish tissue studies

The contractor shall define laboratory requirements for analysis of 2015 GLHHFFTS fillet tissue samples for dioxins and furans to achieve consistency with method requirements, detection limits, and quantitation limits applied for analysis of fish tissue samples for dioxins and furans under EPA's National Lake Fish Tissue Study and to facilitate data comparability between these EPA fish contamination studies. As applicable, the contractor shall identify any issues related to defining laboratory requirements for dioxin and furan analysis to achieve method consistency and data comparability between the two fish tissue studies and propose approaches for resolution of these issues. The contractor shall also define laboratory requirements for enhancing and applying a CEC screening method to analyze 2015 GLHHFFTS fillet tissue samples for CECs that was initially developed by EPA's GLNPO. The WACOR will provide the necessary information for defining laboratory requirements to expand work on refining, testing, and applying the existing CEC screening method.

The contractor shall prepare the SOW for analysis of 2015 GLHHFFTS fillet tissue samples for dioxins and furans using the same format and type/level of detail of information applied in the development of existing SOWs developed for other 2015 GLHHFFTS target chemicals of concern (e.g., PCBs and PFCs). In developing the dioxin and furan analysis SOW, the contractor shall assume analysis of 153 fillet tissue samples and shall incorporate requirements from applicable EPA laboratory competency policy (available online at http://www.epa.gov/fem/lab_comp.htm) to determine laboratory qualifications. The contractor, in accordance with their own internal procurement procedures, shall use available information or contact laboratories directly to identify laboratories qualified to respond to this SOW. Prior to distributing the SOW for dioxin and furan analysis of 2015 GLHHFFTS fillet tissue samples to qualified laboratories for response, the contractor shall provide an electronic copy of each draft SOW for WACOR review and incorporate WACOR comments into the draft SOW to produce the final SOW. The contractor shall be responsible for using a competitive process to obtain analytical laboratory services for dioxin and furan analysis of the fish fillet tissue samples, which includes distributing the SOW to qualified laboratories, evaluating laboratory responses to the SOW to secure services from an experienced laboratory with demonstrated technical qualifications to successfully meet the requirements for analyzing fish fillet samples for dioxins and furans, and reporting the results of the competitive process to the WACOR. The contractor shall also prepare the SOW for enhancement of GLNPO's method for screening fish tissue samples for CECs and for application of this method to analyze the 2015 GLHHFFTS fillet tissue samples for selected CECs. The contractor shall assume analysis of 153 fillet tissue

samples for selected CECs. The WACOR will obtain the CEC tissue screening method information necessary to prepare the SOW from GLNPO and forward it to the contractor. The contractor shall complete an appropriate laboratory solicitation process to obtain the services of a laboratory that is most qualified to perform the analytical work related to refining the CEC tissue screening method and using the method to analyze the 2015 GLHHFFTS fillet tissue samples for the selected CECs. For cost estimating purposes, assume that the cost of analyzing the 153 2015 GLHHFFTS fillet tissue samples for CECs will be similar to the combined cost of analyzing the fillet tissue samples for PCBs and PFCs.

Prior to laboratories initiating dioxin/furan and selected CEC analysis of 2015 GLHHFFTS fillet tissue samples, the contractor shall revise the existing 2015 GLHHFFTS analytical activities QAPP to add all the required information for the dioxin/furan and selected CEC analyses. Depending on the schedule for preparation and release of the dioxin/furan and CEC laboratory solicitations and for the respective analytical laboratory selections, the 2015 GLHHFFTS project-specific QAPP (PQAPP) may require separate revisions for these two types of contaminant analyses. In preparing these PQAPP revisions, the contractor shall follow current EPA guidance for QAPP development. For each type of contaminant analysis (dioxins/furans and selected CECs), the contractor shall prepare a draft revised PQAPP for WACOR review and incorporate WACOR comments on the draft revised PQAPP to produce the draft final revised PQAPP for review by the WACOR and other individuals designated for PQAPP approval. The contractor shall produce a final signed revised PQAPP for each type of contaminant analysis based on final comments from the WACOR who will compile and forward comments from all the reviewers and signatures of the approvers. The contractor shall prepare and deliver electronic copies of each final signed revised PQAPP in two formats, WORD and PDF. The WACOR will circulate each final signed revised PQAPP to the PQAPP distribution list and forward a signed copy of each the revised PQAPPs to the CL COR for approval.

The contractor shall coordinate shipments of 2015 GLHHFFTS fish fillet tissue samples to the laboratories designated for dioxin/furan and CEC analysis, respectively. The contractor shall pack the fillet tissue samples following procedures described in the 2015 GLHHFFTS analytical activities QAPP, prepare shipping documentation and transport coolers containing the fillet tissue samples to an overnight delivery service, track the progress of the fillet tissue sample shipment, contact the overnight delivery service immediately to resolve any problems that develop during shipment of the samples, notify the WACOR within 24 hours about the shipping problems and their resolution, confirm receipt of coolers containing the samples with the laboratory and notify the WACOR on the day of cooler delivery, and report any sample condition issues to the WACOR within 24 hours after the laboratory has inspected the coolers.

The contractor shall maintain continuous oversight of laboratory work performance for the laboratories analyzing 2015 GLHHFFTS fillet tissue samples for target chemicals of concern, tracking compliance of each laboratory with technical and QA requirements and adherence to the data delivery schedule. The contractor shall notify the WACOR within 24 hours if any problems develop with the quality or timeliness of work being performed by the laboratories conducting analysis of 2015 GLHHFFTS target chemicals of concern and shall initiate corrective actions to address these problems. Corrective actions for quality issues are specified in the 2015

GLHHFFTS analytical activities QAPP.

The contractor shall ensure that the analytical laboratories apply formats for reporting 2015 GLHHFFTS contaminant of concern fillet tissue data (e.g., dioxin/furan and selected CEC fillet tissue data) that are consistent with requirements in the 2015 GLHHFFTS analytical activities QAPP and will facilitate application of manual and automated review procedures developed for previous fish contamination studies (e.g., 2010 GLHHFFTS) and applied to the 2015 GLHHFFTS.

The contractor shall continue to provide a secure freezer facility for storing archived fish tissue samples from EPA fish tissue studies that meets the specifications in the 2015 GLHHFFTS PQAPP for long-term storage of these samples (e.g., freezer temperature maintained at less than or equal to minus 20°C). A freezer at Microbac Laboratories in Baltimore, MD is the current repository for the archived fish tissue samples. It contains over 10,000 jars of NLFFTS fish tissue samples, about 80 containers of PPCP Fish Pilot Study fish tissue samples, about 300 jars of 2010 GLHHFFTS fish tissue samples, and about 700 jars of 2013-14 NRSA fish tissue samples. The contractor shall ensure that the archived fish tissue samples are labeled according to PQAPP specifications, organize the archived samples in the freezer by project, develop project-specific inventories of archived fish tissue samples and submit electronic copies of the inventories to the WACOR, and manage the long-term storage of the archived samples. The archived sample inventories will identify the EPA fish tissue study and include information on the content and condition of each sample being stored for that study and on the location in the freezer of each sample associated with that study. The contractor shall update applicable inventories when archived fish tissue samples are removed or added to the long-term storage facility and submit revised archived sample inventories to the WACOR. The contractor shall not remove any archived fish tissue samples either temporarily or permanently from the freezer without written approval from the WACOR. The contractor shall notify the WACOR via email within 24 hours of the arrival of new archived fish tissue samples from any of the analytical laboratories working on fish tissue analyses for ongoing EPA fish tissue studies.

During this work assignment period of performance, the contractor shall conduct an assessment of the condition of the full set of NLFFTS archived fish tissue samples (over 10,000 jars) that have been stored in the freezer for up to 16 years. In conducting this assessment of the NLFFTS archived fish tissue samples, the contractor shall complete the following activities:

- identify archived fish tissue sample jars that are no longer viable for tissue analysis due to various types of damage (e.g., tissue desiccation and broken jars or jar lids)
- develop and submit a report on the assessment results to the WACOR that describes the condition of each of the fish tissue samples and includes a recommendation on whether to retain or discard each of the samples based on their condition
- remove the damaged fish tissue sample jars from the freezer after WACOR review of the assessment results and approval of recommendations for tissue sample disposal
- use an appropriate approach to discard the damaged fish tissue samples
- reorganize the freezer space to create more space for interim storage of whole fish samples and for long-term storage of existing and future archived fish tissue samples

- update the NLFTS archived fish tissue sample inventory to reflect the disposal of damaged archived fish tissue samples

Deliverables: Draft and final SOWs for analysis of 2015 GLHHFFTS fillet tissue samples for dioxins/furans and selected CECs; Draft, draft final, and final revised 2015 GLHHFFTS analytical activities PQAPP providing required information for dioxin/furan and CEC analyses; Fillet tissue sample shipment to analytical laboratories for dioxins/furan and CEC analyses; Analytical results for analyses of up to 153 2015 GLHHFFTS fillet tissue samples for dioxins/furans and selected CECs; Archived fish tissue sample inventories and NLFTS archived tissue sample condition assessment results and recommendations for discarding individual archived tissue samples.

1.3 Data Review and Other QA Support

The contractor shall apply manual and automated systems for qualitative and quantitative review of analytical and quality control (QC) data generated by analytical laboratories during preparation and analysis of the 2015 GLHHFFTS fillet tissue samples. The contractor shall review the data for completeness, accuracy, and compliance with QC procedures, acceptance criteria, and reporting requirements specified in the 2015 GLHHFFTS analytical activities PQAPP. The contractor shall also validate the quality of the data by evaluating data quality and assigning flags consistent with those used to validate fish tissue data for previous studies (e.g., the National Lake Fish Tissue Study and the 2013-14 NRSA) to identify results with potential quality issues. On a monthly basis, the contractor shall prepare and submit a data review progress report that includes information on receipt of data from the laboratories analyzing 2015 GLHHFFTS fillet tissue samples and submitting analytical and QC data for this study. The contractor shall report laboratory progress on analysis of 2015 GLHHFFTS fillet tissue samples for each target chemical or chemical group and the status of contractor review of the data from each laboratory. In the data review progress reports, the contractor shall also identify any analytical results with potential quality problems based on QC requirements specified in the 2015 GLHHFFTS analytical activities PQAPP. For cost estimating purposes, assume QA review of the following 2015 GLHHFFTS analytical data sets and the related QC data for each data set (153 fillet tissue sample results per data set):

- the 2015 GLHHFFTS PCB analytical and QC data
- the 2015 GLHHFFTS PFC analytical and QC data
- the 2015 GLHHFFTS dioxin/furan analytical and QC data
- the 2015 GLHHFFTS CEC analytical and QC data

The contractor shall provide support for a number of other QA activities, including, but not limited to, the following:

- preparing revisions to update existing fish tissue study project-specific analytical activities QAPPs (PQAPPs), as necessary
- compiling target chemical information to incorporate into project-specific QA reports that summarize results of the analytical data quality reviews and describe qualification of any analytical results during the review process for fish tissue studies where fish tissue analysis and QA data reviews have been completed (e.g., the 2010 GLHHFFTS and the

2013-14 NRSA fish tissue study)

- developing materials that describe and document the status of QA activities related to chemical analysis of EPA fish tissue study samples for EPA management briefings, meeting presentations, annual OST QA reports, and QA audits (if scheduled during the work assignment period of performance)
- documenting target chemical QA information to respond to EPA requirements for development of Information Quality Guidelines

The contractor shall prepare fish tissue study analytical QA reports after completion of the QA data review for each study with content and format consistent with the content and format used to present analytical and related information in the National Lake Fish Tissue Study (NLFTS) analytical QA report unless otherwise specified by the WACOR. The NLFTS QA report is available online at <https://www.epa.gov/fish-tech/national-lake-fish-tissue-study-reports>. The contractor developed an initial draft analytical QA report for the 2010 GLHHFTS during a work assignment under the previous OW/Office of Groundwater and Drinking Water/Water Security Division mission contract (EP-C-10-060). The contractor shall prepare a draft final and a final 2010 GLHHFTS QA report during this work assignment period of performance based on comments from the WACOR. The contractor shall also prepare and submit an initial draft, draft final, and a final 2013-14 NRSA fish tissue study analytical QA report following the same process applied for development of the 2010 GLHHFTS analytical QA report. The WACOR will review and approve all final fish tissue study analytical QA reports.

The WACOR will specify format and content for development of materials to document other QA activities, as required. In addition to the development of data review monthly progress reports and the project-specific analytical QA reports, assume the following other QA activities for cost estimating purposes: preparation and submission of fish tissue study analytical QA information for the annual OST QA report and development of materials documenting QA activities related to EPA fish tissue study target contaminants of concern for three briefings and six meeting presentations.

Deliverables: Data review monthly progress reports; Draft final and final analytical QA report for the 2010 GLHHFTS; Initial draft, draft final and final analytical QA report for the 2013-14 NRSA fish tissue study; Materials documenting analytical QA activities.

1.4 Data Management Support

The contractor shall provide both manual and automated systems to manage chemical data and related study information for EPA fish tissue studies. The contractor shall utilize these systems to conduct the following types of activities:

- chemical data receipt, storage, and retrieval
- organization and maintenance of project-specific data, which incorporates the chemical data for the respective fish tissue studies and the related field data and statistical information
- sample analysis tracking

- development of project-specific data files (e.g., statistical analysis input files and files for distribution to states and other participants in each fish tissue study)
- preparation of computerized reports to identify errors, to provide information for management briefings or technical presentations, and to produce data summaries or graphics for a variety of applications

The contractor shall receive and store chemical data and related study information for EPA fish tissue studies, including historical data/information and data/information gathered during this work assignment period of performance. These data will typically be in electronic formats, but some data and study information may be delivered as hard copy. The contractor shall maintain an automated inventory of these data and related information and shall provide a secure facility to store project-specific data in an organized, retrievable manner.

The contractor shall incorporate 2015 GLHHFFTS fish tissue data, as applicable, into an existing project-specific database that was developed using Microsoft Access software. This is one of a series of six existing project-specific Access databases that have been organized to efficiently receive, store, manipulate, and retrieve field, laboratory, and statistical data and project information related to individual EPA fish tissue studies. The 2015 GLHHFFTS Access database structure, content, and organization for the fish tissue sample data is consistent with the Access databases prepared for the previous EPA fish tissue studies. The contractor shall also continue to maintain the existing project-specific Access databases developed for previous EPA fish tissue studies and provide documentation on the structure, content, organization, and function for each of the six databases consistent with a user manual format. For all six project-specific Access databases, the contractor shall provide technical support for database maintenance that includes, but is not limited to, testing for data completeness and accuracy and incorporation of data security measures to maintain the integrity and security of the fish tissue study data.

The contractor shall provide support to respond to requests for data and related information for EPA fish tissue studies. These requests will generally require quick responses within a period of one or two days. For responses to requests, the contractor shall retrieve and compile data and other related information, prepare data and related information files in appropriate formats (e.g., data files in Excel and data dictionaries in WORD), and distribute the files as directed by the WACOR. For estimating purposes, assume responses to 30 data requests during the work assignment period of performance.

Deliverables: Integration of dioxin/furan and selected CEC analysis results and other applicable data into the 2015 GLHHFFTS Access database; Documentation for users of EPA fish tissue study Access databases; Responses to data/information requests for EPA fish tissue studies.

1.5 Data Analysis Support

The contractor shall provide support for statistical analysis of EPA fish tissue study data. EPA analyzes environmental data (e.g., fish tissue data) from probability surveys (e.g., the 2013-14 NRSA and the 2015 GLHHFFTS) using agency-developed custom programs in R statistical

software. These programs generate statistical results, such as weighted (due to unequal probability-based study designs) means, medians, standard deviations, percentiles, and cumulative distribution functions with confidence intervals. The contractor shall prepare chemical-specific input data files for statistical analysis of the fish tissue study analytical results that incorporate data for each sample and for each chemical or chemical group from all the valid probability-based fish tissue samples. In developing these statistical input files, the contractor shall apply appropriate formats of statistical input files used for previous fish tissue studies (e.g., Excel files that apply the format of the chemical-specific 2010 GLHHFFTS statistical input files for development of the corresponding chemical-specific 2015 GLHHFFTS statistical input files). The WACOR will provide project-specific master lists of valid fish tissue samples. For estimating purposes, assume preparation of statistical analysis input files for the following 2015 GLHHFFTS data sets:

- 2015 GLHHFFTS mercury data for the 153 fillet tissue samples
- 2015 GLHHFFTS PCB data for the 153 fillet tissue samples
- 2015 GLHHFFTS PFC data for the 153 fillet tissue samples
- 2015 GLHHFFTS dioxin/furan data for the 153 fillet tissue samples
- 2015 GLHHFFTS CEC data for up to the 153 fillet tissue samples

The contractor shall also provide support for development of comparative analyses of probability-based fish tissue data (e.g., 2013-14 NRSA fish fillet tissue and fish plug tissue mercury analysis results) as directed by the WACOR. These analyses may include, but are not limited to, various statistical comparisons of fish tissue data sets to test for statistically significant differences between or among fish tissue data sets. The contractor shall plan, perform, and prepare summaries of the statistical results for incorporation into technical reports and/or articles for publication in scientific journals.

Deliverables: Draft and final input files for statistical analysis of 2013-14 NRSA target chemical data; Comparative analyses of target chemical data.

Task 2: Support for Reporting Results of Contaminant Surveillance Monitoring in U.S. Waters

The contractor shall provide support for reporting results of EPA fish tissue studies conducted for surveillance monitoring of contaminants of concern in national water resources, including results from the 2013-14 NRSA fish tissue study and the 2015 NCCA/GLHHFFTS. These data will assist EPA in evaluating the effectiveness of policies, programs, and tools to protect and enhance the quality of water resources related to human health in U.S. rivers and the Great Lakes. Support for this task will focus on reporting results of target chemical analyses of 2013-14 NRSA and 2015 GLHHFFTS fish tissue samples, including development of data summaries, technical reports and presentations, and articles for scientific journals. Support for this task will also include preparation of information (i.e., text and graphics) for development of a variety of outreach materials related to the EPA fish tissue studies. Specific activities to be performed under this task are described in sub-tasks 2.1 and 2.2.

2.1 Technical Document Support

The contractor shall provide support for development of technical documents to report 2013-14 NRSA and 2015 GLHHFFTS target chemical results and compare these results to similar chemical results from related EPA studies (e.g., the 2010 GLHHFFTS). These technical documents may include, but are not limited to, data summaries, final technical reports, and scientific journal articles for release and publication of the target chemical data. Contactor support for technical document development may include, but is not limited to, the following:

- preparation of data summaries, text, and graphics for incorporation into technical reports or scientific journal articles
- compilation, analysis, and integration of data and related technical information from multiple sources into a technical document
- application of EPA-compatible software for document production (e.g., Microsoft WORD)

Two examples of technical documents that EPA has planned for development during the work assignment period of performance include a scientific article on the 2013-14 NRSA results for mercury, PCBs, and PFCs and a technical report chapter on the 2015 GLHHFFTS results for target chemicals (e.g., mercury, PCBs, and PFCs). The contractor shall provide a draft of all materials developed for technical documents to the WACOR for approval, and shall prepare the final document materials based on WACOR comments on the draft materials. In developing technical document materials, the contractor shall comply with all the EPA requirements for production and publication of technical reports and with all the requirements for publication of articles in applicable scientific journals. The WACOR will provide information about agency requirements for publication of technical reports. The WACOR will identify journals for submission of scientific articles, and the contractor shall obtain the publication requirements for each journal and incorporate these requirements into materials for scientific article development. For technical document printing, the contractor shall provide a camera-ready copy and a disk copy (or other electronic storage media, such as a flash drive) of technical document materials in a format that enables the materials to be uploaded onto the INTERNET.

Deliverables: Materials for development of up to 5 technical documents.

2.2 Outreach Materials Support

The contractor shall provide support for development of outreach materials related to monitoring fish tissue for contaminants of concern under the 2015 GLHHFFTS, 2013-14 NRSA, 2010 GLHHFFTS, 2008-09 NRSA, NLFTS, and PPCP Fish Pilot Study. Outreach materials may include, but are not limited to, fact sheets, posters, talking points, electronic slide shows, camera-ready copy, and web site materials (e.g., layouts, text, and graphics). The materials shall be developed for use in media events (e.g., press releases), briefings, meetings, and presentations at conferences or other events. All materials shall be provided in accordance with the limitations

set forth in the Section H clause titled "PRINTING (EPAAR 1552.208-70)." EPA anticipates that outreach materials support during the work assignment period of performance will focus on development of poster, electronic slide show, and web site materials. The contractor shall provide a draft of all materials for approval by the WACOR, and shall prepare the final materials based on WACOR comments on the draft materials. In developing outreach materials, the contractor shall translate complex scientific information into simplified, accurate public communication information. The contractor shall also have the capability to conduct mass mailings and mass e-mail distributions as specified by the WACOR in technical direction. For print products, the contractor shall provide a camera-ready copy and a disk copy (or other electronic storage media, such as a flash drive) in a format that enables the material to be uploaded onto the INTERNET.

Deliverables: Various outreach materials for preparation of up to 10 outreach products.

Task 3: Support for Evaluation of Fish Tissue Sampling Methods for Contaminant Monitoring

The contractor shall provide support for planning and implementing a study designed to evaluate the comparability of results from sampling and analysis of various types of fillet tissue samples for contaminants of concern, focusing on toxic metals (e.g., mercury and selenium). The primary purpose of this study, referred to as the fish plug evaluation study, is to determine if fillet plug sampling and analysis can serve as a reliable surrogate for whole fillet tissue sampling and analysis (the approach applied for all EPA human health fish tissue studies to date) for monitoring mercury levels in fish. Additionally, this study will investigate if it is technically feasible to apply fillet plug sampling and analysis for monitoring selenium concentrations in fish. The proposed study design involves the following elements:

- collecting up to 120 individual fish samples (up to 15 specimens each of four river species and four Great Lakes species) to provide 80 fish samples for mercury analysis and 40 fish samples for selenium analysis
- removing three types of fillet tissue samples from each of the 80 mercury fish samples (five replicates for each type of fillet tissue sample, which includes field-collected fillet plugs, lab-collected fillet plugs, and lab-prepared whole fillet tissue samples)
- analyzing 1200 fillet tissue samples for mercury (based on 80 fish samples x 5 replicates x 3 fillet tissue sample types listed in the bullet above for a total of 1200 fillet tissue samples)
- performing statistical analyses of the mercury data to compare results from the three types of fillet tissue samples
- testing the technical feasibility of using small fillet tissue volumes (0.5-1.0 gram) for analysis of selenium concentrations in fish
- depending on the outcome of the technical feasibility testing for selenium, removing two types of fillet tissue samples from each of the 40 selenium fish samples (3 replicates for each type of fillet tissue sample, which includes field-collected fillet plug and lab-prepared whole fillet tissue samples)
- analyzing 240 fillet tissue samples for selenium (based on 40 fish samples x 3 replicates x

2 fillet tissue sample types listed in the bullet above for a total of 240 fillet tissue samples)

- performing statistical analyses of the selenium data to compare results from the two types of fillet tissue samples

Under Task 3, the contractor shall provide a broad range of support that includes field sampling support, laboratory services support, quality assurance (QA) support, data management support, and data analysis and reporting support. Specific activities to be performed under this task are described in sub-tasks 3.1 through 3.5.

3.1 Field Sampling Support

The contractor shall provide support for collecting and shipping fish samples for the fish plug evaluation study. This support consists of, but is not limited to, the following:

- preparing materials for the fish plug evaluation study field sampling PQAPP
- providing for shipping of fish plug and whole fish samples from field locations to the designated fish sample preparation laboratory
- coordinating and tracking shipment of fish plug and whole fish samples

The contractor shall provide support for development of a field sampling PQAPP for the fish plug evaluation study. The contractor shall prepare materials for the field sampling PQAPP, but not have the primary responsibility for development of this PQAPP. Contractor support for development of the field sampling PQAPP shall consist of preparing text and graphics for the PQAPP that are related to contractor field sampling support responsibilities. The contractor shall provide a draft of all field sampling PQAPP materials for approval by the WACOR, and shall prepare the final PQAPP materials based on WACOR comments on the draft materials. The contractor shall also be responsible for reviewing the field sampling PQAPP during the PQAPP approval process.

The contractor shall be responsible for providing shipping support to transport fish plug samples and whole fish samples from field locations to the fish sample preparation laboratory in Owings Mills, Maryland via priority overnight air delivery. This support shall consist of the following activities:

- providing shipping supplies (e.g., dry ice), as required
- obtaining air bills for shipment of fish plug and whole fish samples in appropriately sized coolers (e.g., fish tissue study coolers for shipment of whole fish samples)
- tracking all shipments of fish samples using information from the air bills
- reporting progress of each cooler shipment to the WACOR, including identifying any shipping problems that develop while the coolers are in transit and how the problems are being resolved
- confirming receipt of the coolers with fish sample preparation laboratory staff and reporting their receipt to the WACOR on the day of delivery
- notifying the WACOR about the condition of fish samples in each cooler within 24 hours

after cooler delivery

For cost estimating purposes, assume the following: shipment of up to 20 coolers (the type of coolers used for shipping fish tissue study whole fish samples) containing whole fish samples (an average of four fish per cooler) and a minimum of 50 pounds of dry ice; shipment of up to 20 coolers (the type of coolers used for shipping fillet tissue samples to analytical laboratories) containing fish plug samples (20 plug samples from four fish) and 10-15 pounds of dry ice; shipment of half of the whole fish and fish plug coolers (10 coolers of each type) from three Great Lakes (e.g., Lake Erie, Lake Michigan, and Lake Ontario); and shipment of half of the whole fish and fish plug coolers (10 coolers of each type) from three mid-Atlantic rivers (e.g., the Delaware, Potomac, and Susquehanna Rivers).

Deliverables: Draft and final fish plug evaluation study field sampling PQAPP materials; Fish sample shipping supplies.

3.2 Laboratory Services Support

The contractor shall provide technical and logistical support for planning, securing, coordinating, and monitoring laboratory services for analysis of fish plug evaluation study fillet tissue samples for mercury and for selenium (as applicable). The contractor shall provide laboratory services support that includes, but is not limited to, the following activities:

- defining laboratory requirements
- determining laboratory competency in order to be a qualified laboratory, in addition to evaluating laboratory capabilities to meet any other requirements leading to qualification of laboratories for each type of chemical analysis
- preparing and distributing analytical statements of work (SOWs) to qualified laboratories
- evaluating responses to the SOWs to secure laboratory services from an experienced laboratory with demonstrated technical qualifications for each type of chemical analysis
- developing an analytical activities QAPP for the fish plug evaluation study that includes required information for fish sample preparation and for analysis of fillet tissue samples for mercury and for selenium (as applicable)
- coordinating shipments of fish fillet tissue samples to laboratories designated for mercury and selenium analyses
- maintaining continuous oversight of laboratory work performance
- developing formats for data reporting
- providing oversight for preparation of fillet tissue samples (if excess whole fillet tissue is available) for archive and storing them in the freezer facility maintained for long-term storage of archived EPA fish tissue samples

The contractor shall define laboratory requirements for analysis of the fish plug evaluation study fillet tissue samples for mercury to achieve consistency with method requirements, detection limits, and quantitation limits applied for analysis of fish tissue samples for mercury under recent EPA fish tissue studies (e.g., 2013-14 NRSA fish tissue study and 2015 GLHHFFTS). As

applicable, the contractor shall identify any issues related to defining laboratory requirements for mercury analysis to achieve method consistency and propose approaches for resolution of these issues. The contractor shall also define laboratory requirements for analysis of fillet tissue samples for selenium, as required.

The contractor shall prepare the SOWs for analysis of fish plug evaluation study fillet tissue samples for mercury and selenium using the same format and type/level of detail of information applied in the development of the mercury SOW developed for the 2015 GLHHFFTS. In developing the mercury and selenium analysis SOWs, the contractor shall also incorporate requirements from applicable EPA laboratory competency policy (available online at http://www.epa.gov/fem/lab_comp.htm) to determine laboratory qualifications. For the mercury SOW, the contractor shall assume that there will be 1200 fillet tissue samples to analyze for mercury (800 fillet plug samples and 400 whole fillet tissue samples) based on the proposed design for the mercury portion of fish plug evaluation study. For the selenium SOW, the contractor shall assume that there will be up to 240 fillet tissue samples to analyze for selenium (120 fillet plug samples and 120 whole fillet tissue samples) based on the proposed design for the selenium portion of fish plug evaluation study. The contractor, in accordance with their own internal procurement procedures, shall use available information or contact laboratories directly to identify laboratories qualified to respond to these SOWs. Prior to distributing the SOWs for mercury and selenium analyses to qualified laboratories for response, the contractor shall provide an electronic copy of each draft SOW for WACOR review and incorporate WACOR comments into each draft SOW to produce the corresponding final SOW. The contractor shall be responsible for using a competitive process to obtain analytical laboratory services for mercury and selenium analyses of the fish fillet tissue samples, which includes the following:

- distributing the respective SOWs to qualified laboratories,
- evaluating laboratory responses to the SOWs to secure services for each metal analysis from an experienced laboratory with demonstrated technical qualifications to successfully meet the requirements for analyzing fillet tissue samples
- reporting the results of the competitive process to the WACOR

Prior to laboratories initiating mercury and selenium analyses of fish plug evaluation study fillet tissue samples, the contractor shall develop a project-specific analytical activities QAPP (PQAPP) for this study. In preparing the initial PQAPP (and subsequent PQAPP revisions), the contractor shall follow current EPA guidance for QAPP development. For each type of analytical activity (i.e., fish sample preparation, which will be covered in the initial PQAPP; mercury analysis of fillet tissue samples, which will be covered in Revision 1 of the PQAPP; and selenium analysis of fillet tissue samples, which will be covered in Revision 2 of the PQAPP), the contractor shall prepare the draft PQAPP (and drafts of subsequent PQAPP revisions) for WACOR review and incorporate WACOR comments on the draft PQAPP (and on drafts of the subsequent PQAPP revisions) to produce the draft final PQAPP (and draft final PQAPP revisions) for review by the WACOR and other individuals designated for PQAPP approval. The contractor shall produce a final signed PQAPP (and final revised PQAPPs) based on final comments from the WACOR who will compile and forward comments from all the reviewers and signatures of the approvers. The contractor shall prepare and deliver electronic copies of the

final signed PQAPP (and final signed revised PQAPPs) in two formats, WORD and PDF. The WACOR will circulate the final signed PQAPP (and the subsequent final signed revised

PQAPPs) to the PQAPP distribution list and forward a signed copy of the final PQAPP (and the final revised PQAPPs) to the CLCOR for approval.

The contractor shall coordinate shipments of fish plug evaluation study fillet tissue samples to the laboratories designated for mercury analysis and selenium analysis, respectively. The contractor shall provide oversight for packing the fillet tissue samples, preparing shipping documentation for each cooler, and transporting coolers containing the fillet tissue samples to an overnight delivery service by ensuring that procedures described in the fish plug evaluation study analytical activities PQAPP are followed. The contractor shall also track the progress of fillet tissue sample shipments, contact the overnight delivery service immediately to resolve any problems that develop during shipment of the samples, notify the WACOR within 24 hours about the shipping problems and their resolution, confirm receipt of coolers with the laboratory and notify the WACOR on the day of their delivery, and report any fillet tissue sample condition issues to the WACOR within 24 hours after the coolers have been delivered to the laboratory. For cost estimating, assume that there will be 20 batches of whole fillet tissue samples (20 samples per batch) and 40 batches of fillet plug samples (20 samples per batch) to ship to the laboratory designated for mercury analysis, and each fillet tissue sample shipment will generally contain two batches of samples. Additionally, assume that there will be 6 batches of whole fillet tissue samples (20 samples per batch) and 6 batches of fillet plug samples (20 samples per batch) to ship to the laboratory designated for selenium analysis. Generally, each fillet tissue sample shipment for selenium analysis will contain two batches of samples.

The contractor shall maintain continuous oversight of laboratory work performance for the laboratories analyzing fish plug evaluation study fillet tissue samples for mercury and selenium, tracking compliance of each laboratory with technical and QA requirements and adherence to the data delivery schedule. The contractor shall notify the WACOR within 24 hours if any problems develop with the quality or timeliness of work being performed by the laboratories conducting analysis of fish plug evaluation study fillet tissue samples and shall initiate corrective actions to address these problems. Corrective actions for quality issues are specified in the fish plug evaluation study analytical activities PQAPP.

The contractor shall ensure that the analytical laboratories apply formats for reporting fish plug evaluation study mercury and selenium fillet tissue data that are consistent with requirements in the fish plug evaluation study analytical activities PQAPP and that will facilitate application of manual and automated review procedures developed for the EPA fish tissue studies.

Deliverables: Draft and final SOWs for analysis of fish plug evaluation study fillet tissue samples for mercury and selenium; Draft, draft final, and final fish plug evaluation study analytical activities PQAPP and revised PQAPPs; Analytical results for mercury and selenium.

3.3 Quality Assurance (QA) Support

The contractor shall apply manual and automated systems for qualitative and quantitative review of analytical and quality assurance/quality control (QA/QC) data generated by analytical laboratories during mercury and selenium analyses of the fish plug evaluation study fillet tissue samples. The contractor shall review the data for completeness, accuracy, and compliance with QA/QC procedures, acceptance criteria, and reporting requirements specified in the fish plug evaluation study analytical activities PQAPP. The contractor shall also validate the quality of the data by evaluating data quality and assigning flags consistent with those used to validate fish tissue data for EPA fish tissue studies (e.g., the 2015 GLHHFFTS) to identify results with potential quality issues. On a monthly basis, the contractor shall prepare and submit a data review progress report that includes information on receipt of data from the laboratories analyzing fish plug evaluation study fillet tissue samples and submitting analytical and QA/QC data for this study. The contractor shall report laboratory progress on analysis of fish plug evaluation study fillet tissue samples for each target chemical (i.e., mercury and selenium) and the status of contractor review of the data from each laboratory. In the data review progress reports, the contractor shall also identify any analytical results with potential quality problems based on QA/QC requirements specified in the fish plug evaluation study analytical activities PQAPP. For cost estimating purposes, assume QA review of the following fish plug evaluation study analytical data sets with mercury results for 1200 fillet tissue samples and selenium results for 240 fillet tissue samples, along with the related QC data for each data set:

- the fish plug evaluation study mercury analytical and QC data
- the fish plug evaluation study selenium analytical and QC data

The contractor shall provide support for other QA activities, including, but not limited to, the following:

- preparing revisions to update the fish plug evaluation study analytical activities PQAPP, as necessary
- developing chemical-specific analytical QA summaries for the fish plug evaluation study

The contractor shall prepare chemical-specific analytical QA summaries after completing the QA data review for each fish plug evaluation study target chemical (i.e., mercury and selenium). These analytical QA summaries shall consist of text and graphics that describe the results of each of the analytical data quality reviews and qualification of any analytical results during each data quality review process. The contractor shall develop the analytical QA summaries using content and formats consistent with the content and formats used to present analytical QA results for reporting EPA fish tissue study target chemical data in technical journal articles (e.g., *A Probability-Based Assessment of Contaminants in Great Lakes Fish*, which reports the mercury, PCB, and PBDE results from the 2010 GLHHFFTS). For each of the chemical-specific analytical QA summaries, the contractor shall prepare and submit an initial draft and draft final analytical QA summary for WACOR review. The contractor shall incorporate WACOR comments on the initial draft and draft final analytical QA summaries to produce the draft final and final analytical QA summaries, respectively. The WACOR will review and approve the final fish plug evaluation study analytical QA summaries.

Deliverables: Data review monthly progress reports; Draft, draft final, and final chemical-specific analytical QA summaries.

3.4 Data Management Support

The contractor shall provide both manual and automated systems to manage chemical data and related study information for the fish plug evaluation study. The contractor shall utilize these systems to conduct the following types of activities:

- chemical data receipt, storage, and retrieval
- organization and maintenance of project-specific data, which incorporates the chemical data for the study and the related field data and statistical information
- sample analysis tracking
- development of data analysis files (e.g., statistical analysis files)
- preparation of computerized reports to identify errors, to provide information for management briefings or technical presentations, and to produce data summaries or graphics for various applications

The contractor shall receive and store chemical data and related study information for the fish plug evaluation study. These data will typically be in electronic formats, but some data and study information may be delivered as hard copy. The contractor shall maintain an automated inventory of these data and related information and shall provide a secure facility to store the study data in an organized, retrievable manner.

The contractor shall prepare a fish plug evaluation study database using Microsoft Access software to efficiently receive, store, manipulate, and retrieve field, laboratory, and statistical data and project information related to this study. The fish plug evaluation study Access database structure, content, and organization shall be consistent with the structure, content, and organization of the Access databases prepared for the EPA fish tissue studies. The contractor shall also provide technical support for maintenance of this Access database that includes, but is not limited to, testing for data completeness and accuracy and incorporation of data security measures to maintain the integrity and security of the fish plug evaluation study data.

Deliverables: Fish plug evaluation study Access database

3.5 Data Analysis and Reporting Support

The contractor shall provide support for analyzing and reporting fish plug evaluation study fillet tissue data and related fillet tissue data from the 2013-14 NRSA. The objective for statistical analysis of these data is to apply statistical tests that can assess similarities and differences among the various sets of fillet tissue data (e.g., field-based fillet plug mercury data, lab-based fillet plug mercury data, and lab-based whole fillet tissue mercury data). Statistical analysis and data reporting support shall include, but is not limited to, the following:

- Developing and implementing a statistical analysis plan
- Reporting the statistical analysis results and the interpretation of the results

- Summarizing the analytical and statistical results for the fish plug evaluation study and 2013-14 NRSA fillet tissue data

The contractor shall provide support for developing and implementing a statistical analysis plan for the fish plug evaluation study fillet tissue data and related 2013-14 NRSA fillet tissue data. The statistical analysis plan shall identify and describe the statistical analysis objectives, the fillet tissue data sets available for analysis, the statistical tests and test parameters that will be applied in comparing the various fillet tissue data sets, and the specific comparisons that will be performed between and among various fillet tissue data sets. The contractor shall prepare a draft statistical analysis plan, submit it to the WACOR for review, and incorporate WACOR comments on the draft statistical analysis plan to produce the final statistical analysis plan. The WACOR will review and approve the final statistical analysis plan prior to the contractor initiating implementation of the plan.

The contractor shall prepare a statistical analysis report that includes the statistical analysis results for the fillet tissue data from the fish plug evaluation study and the 2013-14 NRSA and the interpretation of these results. The contractor shall develop a draft report outline for WACOR review and incorporate WACOR comments on the draft outline to produce the final report outline. The WACOR will review and approve the final report outline prior to the contractor beginning development of the statistical analysis report. In developing the statistical analysis report, the contractor shall prepare a draft report for WACOR review and incorporate WACOR comments on the draft report to produce the final report. The WACOR will review and approve the final statistical analysis report. After final report approval, the contractor shall prepare and deliver electronic copies of the final statistical analysis report in two formats, WORD and PDF.

The contractor shall prepare materials (text and graphics) summarizing the analytical and statistical results for the fish plug evaluation study and 2013-14 NRSA fillet tissue data for incorporation of these results into technical presentations, reports, and journal articles. The contractor shall provide a draft of all analytical and statistical result summaries to the WACOR for review and prepare the final analytical and statistical result summaries based on WACOR comments on the corresponding draft result summaries. The WACOR will review and approve the final analytical and statistical result summaries.

Deliverables: Draft and final statistical analysis plans; Draft and final statistical analysis report outlines; Draft and final statistical analysis reports; Draft and final analytical and statistical result summaries.

Task 4: General Technical Support for Contaminant Surveillance Monitoring in U.S. Waters

The contractor shall provide general technical support for surveillance monitoring of fish tissue for contaminants of concern relative to water quality and human health. This support may include, but is not limited to, the following activities:

- planning for future studies or enhancement of existing studies (e.g., 2018-19 NRSA)

- preparation of data and related files (e.g., data dictionaries) in response to requests for EPA fish tissue study data
- literature searches and other research to support fish tissue study planning and reporting of fish tissue study results
- identification, development, assessment, costing, and tracking of new technologies for sampling and analysis, for monitoring, and for threat identification and potential impacts relative to protection of water quality and human health
- statistical support for development or review of technical presentations and reports related to EPA fish tissue studies
- coordination, facilitation, and/or performance of technical expert reviews related to analysis of fish tissue samples for contaminants of concern (e.g., draft analytical methods)
- participation on conference calls or webinars and at meetings, workshops, training events, or conferences as technical experts on analytical activities related to existing and future EPA fish tissue studies or to related studies
- development of technical information in response to EPA management requests to provide support for assessment of fish tissue study results, articulation of project-specific accomplishments, identification of lessons learned, and various other applications
- attendance at fish study team meetings, which are generally held quarterly at EPA headquarters
- preparation for final disposition and storage of project data, other project records, and sample archives for EPA fish tissue studies

The contractor shall perform specific activities for Task 4 as assigned through written technical direction by the WACOR. For cost estimating purposes, assume support for the following activities during the work assignment period of performance:

- planning support for OST participation in the 2018-19 NRSA
- literature searches for studies to inform the process for selection of CECs for the 2015 GLHHFFTS and for methods and/or studies to support evaluation of the use of fish plug sampling to monitor U.S. waters for selenium using EPA's selenium tissue-based criterion
- statistical support for development or review of five technical presentations and reports
- participation as a technical expert on an average of one 60-minute conference call per month
- technical review of 12 presentations, reports, posters, etc. related to EPA fish tissue studies
- development of technical information related to EPA fish tissue studies in response to 15 EPA management requests
- attendance at quarterly fish study team meetings held at EPA headquarters in the Federal Triangle complex
- attendance at one scientific conference with one or more sessions of presentations related to completed, ongoing, or planned work under EPA fish tissue studies (e.g.,

IAGLER meeting in Detroit, MI during Spring 2017)

- preparation of National Lake Fish Tissue Study and PPCP Fish Pilot Study project data and other records for final disposition

Deliverables: Various technical support deliverables per technical direction.

V. SCHEDULE/DELIVERABLES

Task	Deliverable	Schedule
0	Work plan	As per submission requirement in contract
0	Monthly progress and financial progress reports	As per submission requirement in contract
0	Monthly QA activity and issue summary	As per submission requirement in contract
0	QAPP checklists	As per submission requirement in contract
1	Fish sampling supplies	As directed by the WACOR through written technical direction
1	2018-19 NRSA updated field sampling information	As directed by the WACOR through written technical direction
1	Draft and final SOWs for dioxin/furan and CEC analysis of 2015 GLHHFFTS fillet tissue samples	As directed by the WACOR through written technical direction
1	Draft revised 2015 GLHHFFTS PQAPPs for dioxin/furan and CEC analysis of fillet tissue samples Draft final revised 2015 GLHHFFTS PQAPPs for dioxin/furan and CEC analysis of fillet tissue samples Final revised 2015 GLHHFFTS PQAPPs for dioxin/furan and CEC analysis of fillet tissue samples	One week after selection of the respective analytical laboratories 4 days after receipt of WACOR comments 2 days after receipt of signatures from approvers
1	2015 GLHHFFTS fillet tissue sample shipments to labs selected for dioxin/furan and CEC analyses	Initiation of shipments as required for conformance with laboratory data delivery schedules
1	2015 GLHHFFTS dioxin/furan and CEC analytical results	As per laboratory data delivery schedule
1	Archived fish tissue sample inventories	Within one month of addition or removal of samples from the repository (storage freezer)
1	NLFTS archived fish tissue sample condition assessment results and recommendations for discarding individual samples	Within one month after initiation of assessment
1	Data review monthly progress reports	The final day of the month for months where data are delivered and/or reviewed
1	Draft final and final 2010 GLHHFFTS analytical QA reports	One week after receipt of WACOR comments on each version

1	Draft 2013-14 NRSA analytical QA report Draft final 2013-14 NRSA analytical QA report Final 2013-14 NRSA analytical QA report	October 31, 2016 One week after receipt of WACOR comments One week after receipt of WACOR comments
1	Materials documenting analytical QA activities	As directed by the WACOR through written technical direction
1	Incorporation of dioxin/furan and CEC analytical and QA review results into the 2015 GLHHFFTS Access database	Within 3 weeks after completion of the QA reviews
1	User documentation for EPA fish tissue study Access databases	As directed by the WACOR through written technical direction
1	Responses to data/information requests for OST studies	Within 3 days after receipt of request from WACOR
1	Draft and final input files for statistical analysis of 2015 GLHHFFTS target chemical data	Within one month after completion of each target chemical QA data review
1	Comparative analyses of target chemical data	As directed by the WACOR through written technical direction
2	Technical document materials	As directed by the WACOR through written technical direction
2	Outreach materials	As directed by the WACOR through written technical direction
3	Draft and final fish plug evaluation study fish sampling PQAPP materials	As directed by the WACOR through written technical direction
3	Fish sample shipping supplies	As directed by the WACOR through written technical direction
3	Draft and final SOWs for mercury and selenium analysis of fish plug evaluation study fillet tissue samples	As directed by the WACOR through written technical direction
3	Draft, draft final, and final fish plug evaluation study analytical activities PQAPP and revised PQAPPs	As directed by the WACOR through written technical direction
3	Fish plug evaluation study analytical results for mercury and selenium	As per laboratory data delivery schedule
3	Data review monthly progress reports for the fish plug evaluation study	The final day of the month for months where data are delivered and/or reviewed
3	Draft, draft final, and final chemical-specific analytical QA summaries	As directed by the WACOR through written technical direction
3	Fish plug evaluation study Access database that includes field, analytical, and QA review data/information	Within one month after completion of QA review of all mercury and selenium data
3	Draft and final fish plug evaluation study statistical	As directed by the WACOR

	analysis plans	through written technical direction
3	Draft and final fish plug evaluation study statistical analysis report outlines Draft and final fish plug evaluation study statistical analysis reports	As directed by the WACOR through written technical direction As directed by the WACOR through written technical direction
3	Draft and final fish plug evaluation study analytical and statistical result summaries	As directed by the WACOR through written technical direction
4	General technical support deliverables	As directed by the WACOR through written technical direction

VI. REPORTING REQUIREMENTS

Monthly Progress Reports (including a progress evaluation discussion)

Financial Reports

Project Specific PQAPPs, as applicable

VII. GREEN MEETINGS AND CONFERENCES

The contractor shall follow the provision of EPA prescription 1523.703-1, *Acquisition of environmentally preferable meeting and conference services (May 2007)*, for the use of off-site commercial facilities for an EPA event, whether the event is a meeting, conference, training session, or other purpose. Environmental preferability is defined at FAR 2.101, and shall be used when soliciting quotes or offers for meeting/conference services on behalf of the Agency.

VIII. CONFERENCES AND WORKSHOPS

The tasks under this work assignment do not require the acquisition of "off-site" facilities for conferences and meetings as defined in the IPN 12-05. AND the events associated with this work assignment are not covered by EPA Order 1900.3 and do not require EPA Form 5170.

The contractor shall immediately alert the WACOR to any anticipated event under the work assignment which may result in incurring an estimated \$20,000 or more cost, funded by EPA, specific to that event, meeting, training, etc. Those costs would include travel of both prime and consultant personnel, planning and facilitation costs, AV and rental of venue costs, etc. The EPA WACOR will then prepare for approval the internal paperwork for the event and will advise the contractor when appropriate signatures have been obtained. At that point, effort can proceed for the event. If the event is being sponsored by another EPA organization, the organization providing the planning is responsible for the approval.

Any event which meets the definition of a "conference," with total net expenditures greater than \$20,000, is required to submit EPA Electronic Form 5170 and Form 5170-A (with cost estimates/actuals). In the case the workflow system is down and CORs require emergency approval, they can submit EPA Form 5170 (PDF) (2pp, 93K) (with cost estimates) to conference@epa.gov.

IX. SOFTWARE APPLICATION AND ACCESSIBILITY (SECTION 508 REHABILITATION ACT AND AMENDMENTS)

Software Application files, if delivered to the Government, shall conform to the requirements relating to accessibility as detailed to the 1998 amendments to the Rehabilitation Act, particularly, but not limited to, § 1194.21 Software applications and operating systems and § 1194.22 Web-based intranet and internet information and applications. See: <http://www.section508.gov/>

Preferred text format:	MS Word, 8.0 or higher (Office 2007 or higher)
Preferred presentation format:	Power Point, Office 2007 or higher
Preferred graphics format:	Each graphic is an individual GIF file
Preferred portable format:	Adobe Acrobat, version 6.0 or higher

The WACOR shall identify which of delivered products will require 508 compliance.

QUALITY ASSURANCE SURVEILLANCE PLAN for the Water Security Division's Technical, Analytical, and Regulatory Mission Support Performance Work Statement

Quality Assurance Surveillance Plan

The requirements contained in this WA are considered performance-based, focusing on the Agency's desired results and outcomes. The contractor shall be responsible for determining the most effective means by which these requirements will be fulfilled. In order to fulfill the requirements, the contractor shall design innovative processes and systems that can deliver the required services in a manner that will best meet the Agency's performance objectives. This performance-based requirement represents a challenge to the contractor to develop and apply innovative and efficient approaches for achieving results and meeting or exceeding the performance objectives, measures, and standards described below. The Contractor's performance will be reflected in the positive or negative evaluation offered by the Agency in the Contractor Performance Evaluation (CPE) which is evaluated annually (per the "Contractor Performance Evaluation" clause in the contract). The WACOR shall submit a complete annual review of the areas outlined in the Quality Assurance Surveillance Plan (QASP), included in the contract, which will then be utilized by the Project Officer in preparing the overall evaluations submitted annually in response to the Contractor Performance Evaluation requirements in the contract.